BATTLE FORCE ACTION OFFICER (BFAO) HANDBOOK

VOLUME II

APPENDICES AND TABS

PREPARED BY: PHD NSWC CODE 4L00
JULY 2000

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PURPOSE STATEMENT

This handbook has been prepared as part of the Battle Force Interoperability Program originally of COMNAVSEASYSCOM (NAVSEA) 05 and subsequently NAVSEA 53. The handbook is a guide for Battle Force Action Officers (BFAOs) and a reference to information most frequently needed by BFAOs. The handbook is to be used by BFAOs, On Site Representatives (OSRs) and Project Engineers (PEs) in meeting their responsibilities for their assigned Battle Forces (BFs).

Comments regarding this BFAO Handbook and requests for additional copies shall be made to the Commander, Port Hueneme Division, Naval Surface Warfare Center, 4363 Missile Way, Port Hueneme, California 93043-4307, Attention Code 4L00.

SIGNATURE PAGE

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RECORD OF CHANGES

CHANGE NO.	DATE	TITLE/DESCRIPTION OF CHANGE

APPENDIX A

Assignment of NAVSEA 05 Responsibility (CNO 021648Z MAY 98)

FM CNO WASHINGTON DC//N09//
TO RHHMHAH/CINCPACFLT PEARL HARBOR HI//N00//
RUCBCLF/CINCLANTFLT NORFOLK VA//N00//
RHDLCNE/CINCUSNAVEUR LONDON UK//N00//
RULSSEA/COMNAVSEASYSCOM WASHINGTON DC//00//
RULSFAN/COMNAVAIRSYSCOM PATUXENT RIVER MD//00//
RUWDHFG/COMSPAWARSYSCOM SAN DIEGO CA//00//
RULSDMA/PEO SC WASHINGTON DC//00//
RUWDHBV/PEOSPACOMMSENS SAN DIEGO CA//00//
RULSSBH/PEO TAD WASHINGTON DC//00//
RULSSBI/PEO CLA WASHINGTON DC//00//
RULSSBE/PEO SUB WASHINGTON DC//00//
RULSFAP/PEOTACAIR PATUXENT RIVER MD //00//
RULSPEA/PEOCMPANDUAV WASHINGTON DC//00//
INFO RULYAFA/COMCARGRU EIGHT
RULYSCC/COMCARGRU FIVE
RULYLCA/COMCARGRU FOUR
RUHPCRO/COMCARGRU ONE
RUHPCGS/COMCARGRU SEVEN
RUFROSA/COMCARGRU SIX
RUHPPSA/COMCARGRU THREE
RULYVLA/COMCARGRU TWO
RULYMPA/COMCRUDESGRU EIGHT
RUHPCCG/COMCRUDESGRU FIVE
RUHPZAE/COMCRUDESGRU ONE
RUHPCDT/COMCRUDESGRU THREE
RHFJEHA/COMCRUDESGRU TWELVE
RULYVTA/COMCRUDESGRU TWO
RUCOSSA/COMNAVAIRLANT NORFOLK VA//00//
RUWFEAA/COMNAVAIRPAC SAN DIEGO CA//00//
RUCBTFA/COMNAVSURFLANT NORFOLK VA//00//
RUWDEAA/COMNAVSURFPAC SAN DIEGO CA//00//
RUCCNON/COMNAVSURFRESFOR NEW ORLEANS LA//00//
RUCBTEV/COMOPTEVFOR NORFOLK VA//00//
RUHBVMA/COMPHIBGRU ONE
RULYSCC/COMPHIBGRU THREE
RULYVKA/COMPHIBGRU TWO
RULYVBA/COMSECONDFLT
RUHPQUA/COMTHIRDFLT
RUHPOAA/COMSEVENTHFLT
RUFRQJQ/COMSIXTHFLT
RHRMDAE/COMFIFTHFLT
RUFRETA/COMSUBGRU EIGHT
RHWIGNA/COMSUBGRU NINE
RHFJKGA/COMSUBGRU TEN
RUEGERW/COMSUBGRU TWO
RUCBKMC/COMSUBLANT NORFOLK VA//00//
RHHMDBA/COMSUBPAC PEARL HARBOR HI//00//
RUCBFAH/COMTRALANT NORFOLK VA//00//

RUWDHLC/COMTRAPAC SAN DIEGO CA//00//
RHRMDAB/COMUSNAVCENT
SUBJ/BATTLE GROUP INTEROPERABILITY//
RMKS/1. THE INTRODUCTION OF INCREASINGLY COMPLEX WARFIGHTING CAPABILITIES INTO THE FLEET HAS RESULTED IN SIGNIFICANT BATTLE GROUP INTEROPERABILITY CHALLENGES. ADDITIONALLY, BGSIT MSGS UNDERSCORE THE REQUIREMENT FOR IMPROVEMENT IN PROCESSES THAT ASSURE THE FLEET THAT IDENTIFIED DEFICIENCIES ARE BEING CORRECTED BY BMC4I AND COMBAT SYSTEM PROVIDERS. REPEAT DEFICIENCIES, FROM BATTLE GROUP TO BATTLE GROUP, ARE MORE FREQUENT AND TROUBLESOME, INDICATIVE OF THE REQUIREMENT TO CONDUCT MORE THOROUGH TESTING PRIOR TO DELIVERY OF FLEET CAPABILITIES.

2. COMNAVSEASYSCOM IS ASSIGNED CENTRAL RESPONSIBILITY TO ADDRESS BMC4I/COMBAT SYSTEMS INTEROPERABILITY PROBLEMS WITHIN THE SYSCOMS/PEOS, AND TO COORDINATE RESOLUTION WITH THE FLEET. NAVSEA 05 WILL DEVELOP POLICY AND ARCHITECTURE FOR BATTLE FORCE WARFARE SYSTEMS ENGINEERING, IMPLEMENT A COMMON WARFARE SYSTEMS ENGINEERING PROCESS AND PROVIDE TOP LEVEL DIRECTION FOR FIELDING AND SUPPORT OF BALANCED COMBAT SYSTEMS FOR SHIPS AND SUBMARINES.

3. NAVSEA 05 IS THE FOCAL POINT FOR COORDINATION AND RESOLUTION OF BATTLEFORCE INTEROPERABILITY ISSUES, AND FOR ESTABLISHMENT OF PROCESSES FOR DEFINING, CONTROLLING AND CERTIFYING EACH BG CONFIGURATION PRIOR TO DEPLOYMENT. AS THE FOCAL POINT, NAVSEA 05 WILL BASELINE EACH BG'S WARFARE SYSTEMS CAPABILITIES, MAINTAIN CONFIGURATION CONTROL OF BASELINES, VERIFY INTEROPERABILITY OF BG CONFIGURATIONS AND FINAL CERTIFY BASELINE CONFIGURATIONS PRIOR TO DEPLOYMENT.

4. TO IMPROVE INTEROPERABILITY OF THE BATTLE GROUPS, COMNAVSEASYSCOM IS IMPLEMENTING A PROCESS WHICH, WITH THE SUPPORT OF CINCLANTFLT AND CINCPACFLT, COORDINATES INSTALLATIONS AND TESTS BATTLE GROUP SYSTEMS INTEROPERABILTY EARLIER IN THE INTERDEPLOYMENT CYCLE. IN THE NEAR TERM, NAVSEA IS LEVERAGING EXISTING INFRASTRUCTURE TO ADDRESS DEPLOYING BG REQUIREMENTS. PROJECT OFFICERS WILL BE ASSIGNED TO EACH BATTLE GROUP COMMANDER TO COORDINATE INSTALLATIONS, CONTROL CONFIGURATION AND PROVIDE A SINGLE POINT OF CONTACT FOR IDENTIFICATION AND TRACKING OF BATTLE GROUP INTEROPERABILITY ISSUES. THIS PROCESS WILL ENABLE MORE MEANINGFUL PARTICIPATION BY BATTLE GROUP COMMANDERS IN THE PRIORITIZATION AND CORRECTION OF DEFICIENCIES AND PROVIDE IMPROVED COMMUNICATION BETWEEN THE FLEET AND THE TECHNICAL COMMUNITY. FOR THE LONG TERM, NAVSEA 05 IS DEVELOPING INITIATIVES TO EXPAND THE CAPABILITIES OF THE EXISTING SHORE BASED TESTING NETWORK TO SUPPORT INTEROPERABILITY TESTING.

5. NAVSEA AND OPNAV WILL COORDINATE WITH THE FLTCINCS TO DEVELOP AND IMPLEMENT AN IMPROVED BG INTEROPERABILTY MANAGEMENT PROCESS. THIS NEW PROCESS, MANAGED BY COMNAVSEASYSCOM, WILL ENSURE THAT APPROPRIATE RESOURCES ARE ALIGNED TO RESOLVE BG INTEROPERABILITY ISSUES. THE GOAL IS TO ALLOW EACH BG TO CONDUCT PREDEPLOYMENT FLEET EXERCISES WITH FULL ATTENTION TO BG WARFIGHTING READINESS, ABSENT DISTRACTIONS RESULTING FROM INTEROPERABILITY FAILURES.//
BT

APPENDIX B

Warfare Systems Guidance and Policy Paper (G&PP) No. 98-03

From: Deputy Commander, Warfare Systems

Subj: BATTLE FORCE INTEROPERABILITY (BFI) CERTIFICATION PROCESS

Ref: (a) OPNAV MSG DTG 021648Z MAY98, Battle Group Interoperability
(b) CINCPACFLT/CINCLANTFLT INST 4720.3, Process for Initiating, Approving and Scheduling Afloat C4I Systems Installations and Upgrades, of 5 Jun 95
(c) NAVSEA Weapons and Combat Systems Guidance and Policy Paper Number 88-08 (Rev 2), Software Quality Improvement(SQI) Program, of 8 Jun 92

Encl: (1) Battle Force Interoperability Certification Milestones, Tasks and Responsible Organizations
(2) Baseline Review Board (BRB), Battle Force Change Control Board (BF CCB) and Battle Force Coordination Planning Group (BF CPG) Membership
(3) Simplified Battle Force Interoperability Certification Process Timeline

1. Purpose. This Warfare Systems Guidance and Policy Paper (G&PP) provides an interim certification methodology for Battle Force Interoperability (BFI) that provides Certified Battle Force configurations and permits operator training and fleet operations without interoperability distractions. Objectives of the certification process ensure:

- Hardware, computer program, firmware, tactical database and navigational database configuration management,
- Baseline configurations of Battle Force (BF) fighting units are hardware and computer program compatible,
- Computer program compatibility, functionality, and reliability is verified by rigorous shore-based and fighting unit testing, and
- Integration and interoperability deficiencies are recorded, prioritized and corrected prior to deployment.

The resources to fully accomplish these objectives will not be available upon the effective date of this policy. Therefore, in the near term, this certification methodology and outcomes of it's implementation will serve to prioritize allocation of existing resources and identify resource shortfalls to influence future planning. Continuous improvement of Battle Group System Integration Test (BGSIT) interoperability issues will be the measure of effectiveness. Battle Force Interoperability requires team effort by the Fleet, System Commanders and Program Offices as established in this G&PP.

2. Definition. Interoperability is the ability of the Battle Management System, Battle Forces, Fighting Units and Systems to provide services to and accept services from other Forces, Fighting Units or Systems, and to use the services so exchanged to enable them to operate effectively together and achieve the assigned mission.

3. Scope. This interim certification methodology applies to Commander in Chief, Pacific Fleet/Commander in Chief, Atlantic Fleet (CINCPACFLT/CINCLANTFLT) assigned ship, aircraft and submarine fighting units assigned to battle forces. All new or upgraded BF fighting unit hardware and computer program installations that impact interoperability, including Modernization Program, Alterations (ALTs), Ordnance Alterations (ORDALT) and emergent Battle Management, Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (BMC4ISR) upgrades requiring rapid installation, will conform to the requirements of this certification methodology. This G&PP will remain in effect until institutionalized in new OPNAV and CINC Instructions. A G&PP transition/implementation plan has been developed for each battle force scheduled for deployment prior to January 2001 which identifies the specific process events from enclosure (1) which are applicable to that battle force. The plans will be distributed by the designated Battle Force Action Officer after final review and approval. Fighting units inserted into existing battle force deployment schedule shall adhere to a G&PP implementation plan developed by the Battle Force

Change Control Board. Additionally, NAVSEA 05 will provide a policy and architecture instruction for battle force warfare systems engineering at a later date via separate correspondence.

4. Background. As the Navy has increased efforts to provide the Fleet with new technology upgrades, the configurations and complexity of hardware and computer program baselines have significantly multiplied. Each baseline has unique functional capabilities and in many instances, the baselines are so unique that few fighting units within a battle force are fully interoperable. The result is a net degradation of warfighting capability within the battle force. To overcome this problem, the Vice Chief of Naval Operations assigned NAVSEA central responsibility to address BMC4ISR/Combat Systems interoperability problems, and to coordinate resolution with the Fleet [reference (a)]. NAVSEA 05 has been designated as the focal point for BFI issues and has been assigned responsibility for developing the processes and procedures to resolve BFI problems. One process that is required to resolve BFI issues is to establish a formal Battle Force Interoperability (BFI) Certification methodology.

5. Guidance and Policy. This G&PP leverages current efforts of the Fleet, NAVAIR, SPAWAR and NAVSEA to form a BFI Certification process [enclosures (1) and (2). This certification process builds upon the existing CINCPACFLT/CINCLANTFLT process for approving interoperability related installations in the Fleet [reference (b)] and the NAVSEA Combat System Computer Program Certification process [reference (c)]. The simplified timeline depicted in enclosure (3) identifies the required milestones and responsible organizations, and delineates associated test and training events that must be accomplished under the BFI Certification process. This new timeline will culminate in BFI Certification after completion of shore-based Battle Group Integration Testing (BGIT) and at-sea Battle Group System Integration Testing (BGSIT). When time does not allow or it is not feasible to correct all BF deficiencies, impact and risk to warfighting capacity will be identified in the Capabilities and Limitations (CAPs & LIMs) Document developed for each battle force. The BFI Certification process described herein is designed to be both flexible and evolutionary, encouraging change to increase battle force benefits and capabilities. However, small changes implemented on one fighting unit can easily lead to complex problems on other BF components. Thus, configuration changes after baselines have been established are not authorized without prior review and written approval by the Battle Force Change Control Board (BF CCB).

6. Review Responsibility. The Warfare Systems Assessment Team, NAVSEA 05D, is responsible for the currency of this certification methodology. This interoperability certification process shall be reviewed and updated at least once per year and will embody lessons learned from previous BFI efforts.

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- **Battle Force Interoperability Certification Milestones, Tasks and Responsible Organizations**

COG	M/S	EVENT
FLTCINC	D-30	The **Battle Force Composition Message** that identifies the hull assignments is promulgated to the BF Commanders, Theater Commanders, other FLTCINCs, TYCOMs, numbered Fleet Commanders and SYSCOMs. NAVSEA and SPAWAR coordinate with schedulers to highlight opportunities for interoperability impacts and identify risks.
Baseline Review Board	D-29	The **Proposed Baseline Configuration** is established for proposed baseline hardware, firmware, computer program/data base configurations for the BF at the Baseline Review Board (BRB). Hardware/firmware and computer programs/data bases installed or planned for installation are identified for all ships, aircraft and submarines. See enclosure (2) for BRB membership.
BF CCB	D-28	The **Battle Force Change Control Board (BF CCB)** for the specific BF will be chartered and membership established. The BF CCB uses the Initial Baseline Configuration List to determine the proposed baseline to be placed under configuration control. NAVSEA maintains the lead data base for the baseline configuration. See enclosure (2) for BF CCB membership.
SPM/APM	D-28	Program Managers will define the **Initial Baseline Configuration** including, resources, training requirements and schedules for planned system installations. The complete list of training and testing related to hardware and computer programs will be evaluated and any necessary schedule changes identified. Any item under development will be assessed for risk and monitored for risk reduction by the BF CCB to ensure the end product delivery does not introduce BFI deficiencies or schedule impacts.
Baseline Review Board	D-27	Promulgate the **Deployment Baseline Configuration** to theater commanders, TYCOMs, embarking staffs, BF Commander and BF CCB. FLTCINC continues the development of the consolidated list of proposed baseline configuration changes as input to the Final Baseline Configuration established at the Deployment Planning Review Conference.
SPM/APM /CSE	D-26	Fighting Unit specific **Initial Combat System Integration Test (CSIT) Readiness Review (ICRR)** sponsored by the Ship Program Manager (SPM), Aircraft Program Manager (APM) and chaired by the Combat System Engineer (CSE) is conducted to determine readiness of the fighting unit's systems and subsystems for integration testing of the total combat system. Readiness topics include: • test and delivery schedules • test bed requirements/status • risks and risk reduction • simulations/stimulations • Training

COG	M/S	EVENT
TYCOM	D-25	**Deployment Planning Review Conference** is held for the SYSCOMs, COMOPTEVFOR, FLTCINCs, and numbered fleet commanders to finalize recommendations to the baseline configuration; determine assets, training, and funding status; and develop a POA&M. TYCOMs determine preliminary installation and training timeline. CINCs promulgate POA&M and initiate requests to OPNAV to identify sponsors for valid but unfunded system requirements. TYCOMs submit BF CCB approved installations to Quarterly Employment Schedule Conference for installation scheduling. Installations will be accomplished during a scheduled availability to the maximum extent possible.
BF CCB	D-24	At completion of the Deployment Planning Review Conference, the BF CCB promulgates the **Final Baseline Configuration** to theater commanders, FLTCINCs, TYCOMs, numbered fleet commanders and SYSCOMs. The Final BF Baseline Configuration List is placed under BF CCB configuration control. Further changes to the Final Baseline require approval from the BF CCB, then FLTCINC concurrence. Disciplined change is encouraged. The list will identify both the hardware/firmware and computer programs/data bases, and will separately list: • installations before D-6 (TCD) • waiver installations after D-6 (TCD) • installations for proof of concept demonstrations.
BF CPG	D-24	**Battle Force Coordination Planning Group (BF CPG)** will meet regularly (quarterly or more frequent) to review all proposed installations and fighting unit schedules, planned baseline configurations, training requirements, computer program and documentation development status, proposed deliveries, integration test plans and test bed development, simulation/stimulation development, and issues/risk assessments. The BF CPG will be the primary source of inputs for the Capabilities and Limitations (CAPs & LIMs) document developed by SEA 05 for each BF.
SPM/APM	D-22	Upon completion of the last upkeep availability for each BF fighting unit/install activity for aircraft, each Ship Program Manager (SPM) or Aircraft Program Manager (APM) shall provide the BF CCB with a **Post Availability Status Report** that identifies systems installed, nomenclature of the hardware, computer program, firmware and lists of tests completed, passed, outstanding or failed and open trouble reports. The SPM/APM shall also specify to BF CCB the recommended training required to support baseline configuration installations.
SPM/APM /CSE	D-19	**Final CSIT Readiness Review (FCRR)** is conducted to verify the readiness of the fighting unit's system/subsystem computer programs, and the test site simulation and stimulation, hardware and computer programs for integration testing.

COG	M/S	EVENT
SPM/APM /CSE	D-18	Begin shore-site **Combat System Integration Testing (CSIT) / Total Ship Integration Test (TSIT)** of fighting unit's computer programs.
SEA 05/ SPAWAR 05	D-13	**Final Battle Group Integration Test (BGIT) Readiness Review** is conducted to verify the readiness of the BF's individual fighting unit combat systems to begin shore-site interoperability testing.
SEA 05/ SPAWAR 05	D-12	Begin shore-site **Battle Group Integration Testing (BGIT)**. This shore based testing effort will test all BF integrated computer program to verify interoperability, compatibility, maturity and reliability under stress in a controlled environment. The final BF configuration will be compared to the Final Baseline Configuration List determined at D-24 and discrepancies will be evaluated for impact.
SEA 05	D-9	Conduct the fighting unit **Fleet Delivery Readiness Review (FDRR)** for Computer program Certification of systems that have completed CSIT/TSIT. Existing SQI criteria will be applied for Certification as follows: • No open high severity program trouble reports • No design deficiencies impacting safety • Successful stressed 25-hour endurance test Navy data link Certification by NCTSI for applicable systems
SEA 05/ SPAWAR	D-7	**Preliminary BFI Certification** issued based on the results of shore-site BGIT. Preliminary CAPs & LIMs document are promulgated. The following criteria will be applied for this preliminary Certification: • Hardware installations complete • Successful completion of BGIT • No open high severity BFI trouble reports • ILS and Crew Training complete • CAPs & LIMs are understood by operational commander • Known deficiencies are understood and accepted, or corrective POA&M issued
FLTCINC	D-6	**Target Configuration Date (TCD)**. The 180-day milestone for Final Baseline installation, testing, training and logistics provisioning. Fighting Unit's crew training is complete and BF basic training phase commences. BF components, as appropriate, chop to operational Commander.
FLTCINC	D-6	Conduct the **Battle Group Systems Integration Test (BGSIT) Readiness Review**. Identify all computer program versions planned for testing, validate interoperability of fighting unit-to-fighting unit systems in the BF based on change levels (e.g., IPRs implemented), verify crew training plans (operator and maintenance), and finalize installation plan for late systems. Examine all open issues and develop fall-back positions and work-around plans.

COG	M/S	EVENT
FLTCINC	D-5	Intermediate BF training commences. BGSIT at-sea Final Integration Test (FIT) and COMPTUEX will be scheduled for an underway period and may be conducted concurrently.
FLTCINC	D-4	**BGSIT FIT** completes. Advanced BF training commences. SYSCOMs and TYCOMs initiate corrective actions to resolve BGSIT identified issues.
FLTCINC	D-3	**Joint Integration Test (JIT)** commences. JIT and FLEETEX will be scheduled for an underway period and may be conducted concurrently.
SEA 05	D-2	**Final CAPs & LIMs** document promulgated.
FLTCINC	D-1	Advanced BF training completes and **POM** commences.
SEA 05	D-1	**Final Battle Force Certification** will be issued by SEA 05 based on completion of BGSIT and final "assess and fix" performance period. Criteria for Certification: • Successful completion of BGSIT (i.e., all required systems available and subjected to interoperability testing) • No open high severity BFI trouble reports • Joint Data Link Certification by JITC/NCTSI for applicable systems
FLTCINC	D	BF Deployment

Baseline Review Board (BRB)
Battle Force Change Control Board (BF CCB)
Battle Force Coordination Planning Group (BF CPG)
Membership

BASELINE REVIEW BOARD (BRB)

CINCLANTFLT – Chair (Appropriate deploying BF)
CINCPACFLT – Chair (Appropriate deploying BF)
NAVSEA 05, Deputy-Chair
TYCOM Rep
2ND FLT Rep
SPAWAR 05
USMC Rep
3RD FLT Rep
OPNAV N6/N8
NAVAIR 05
Following Members support as required:
PEO SCS
PEO T
SSPO
SEA 08
PEO TAD/SC
PEO CARRIERS
PEO A
PEO CU
SEA 92
PEO SCS
PEO EXW

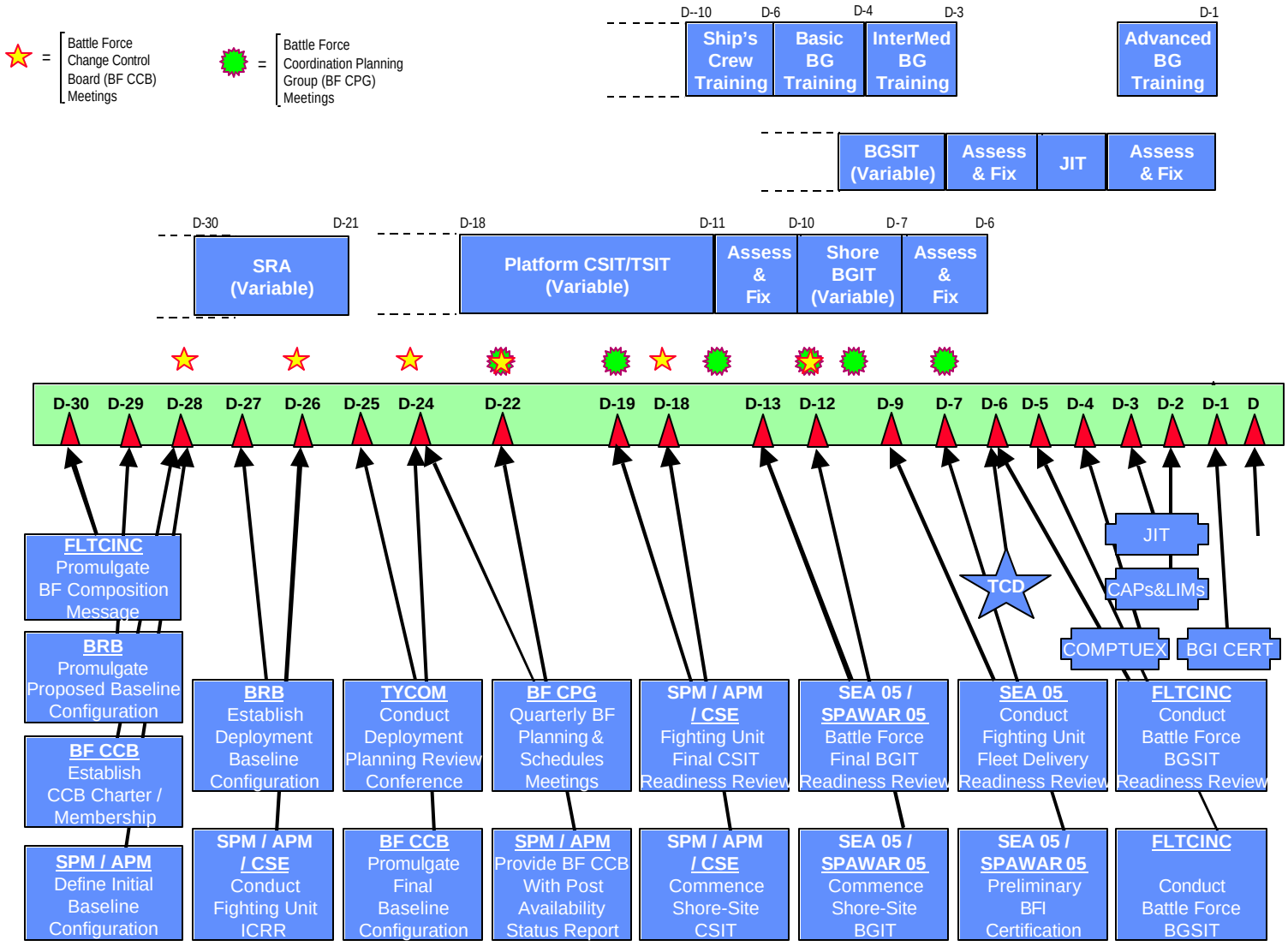
BF CHANGE CONTROL BOARD (CCB)

NAVSEA 05 - Chair
SPAWAR 05 - Deputy Chair
CINCLANTFLT
BG CDR
2ND FLT Rep
OPNAV N6/N8
NAVAIR 05
CINCPACFLT
TYCOM Rep
3RD FLT Rep
USMC Rep
Following Members support as required:
PEO SCS
PEO T
SSPO
PEO SCS
PEO EXW
PEO A
PEO CU
SEA 92
PEO TAD/SC
PEO CARRIERS

BF COORDINATION PLANNING GROUP (CPG)

SEA 05
USMC Rep
NAVAIR Type Desks
Combat System Engineers
CINCPACFLT
2ND FLT Rep
SPAWAR 05
NAVAIR 05
Fighting Unit PMs
CINCLANTFLT
BG Staff Rep
3RD FLT Rep

SIMPLIFIED BATTLE FORCE INTEROPERABILITY CERTIFICATION PROCESS TIMELINE



APPENDIX C

CINCLANTFLT/CINCPACFLT Instruction 4720.3A

CINCLANTFLT/CINCPACFLT INSTRUCTION 4720.3A

Subj: MANAGEMENT OF AFLOAT COMBAT SYSTEMS AND C4I INSTALLATIONS AND IMPROVEMENTS

Ref: (a) CNO WASHINGTON DC 021648Z May 98
(b) COMNAVSEASYSCOM ltr 9400 Ser 05/051 of 7 Aug 98
(c) CINCPACFLT/CINCLANTFLTINST 4720.4A
(d) NAVSEA Technical Specification 9090-310
(e) CNO Memo 1500 Ser N7/8U637313 of 14 Oct 98

Encl: (1) D–30 Timeline
(2) ”A through O” Process
(3) Baseline Review Board
(4) Battle Force Change Control Board
(5) D + 2 Feedback
(6) List of Acronyms

1. Purpose. To provide orderly process and procedures for the efficient implementation of combat systems and command, control, communications, computers and intelligence (C4I) systems across the Battle Force (BF). The primary intent of this process is to ensure the combat deployers, (i.e., the Carrier Battle Group (CVBG or BG), the Amphibious Ready Group (ARG) with the embarked Marine Expeditionary Unit (MEU), Pacific Fleet Middle East Force (PACMEF), and the Mine Warfare Readiness Group (MIWRG)), receive improved, certified warfighting technologies, in order to achieve the highest possible degree of warfighting capability and interoperability; and to ensure that these capabilities are provided with the proper training, logistics, and technical documentation. Configuration control for deploying units not covered by a BG/ARG/PACMEF/MIWRG deployment will be handled in accordance with paragraph eight.

2. Cancellation. CINCPACFLT/CINCLANTFLTINST 4720.3. For LANTFLT, message CINCLANTFLT NORFOLK VA 241200Z Jul 98 is also superceded. This instruction should be reviewed in its entirety due to significant revisions made from CINCPACFLT/CINCLANTFLTINST 4720.3.

3. Scope. This instruction addresses the process for initiating, approving, and scheduling combat systems and C4I system installations and upgrades, including software deliveries, with an emphasis on BG/ARG/PACMEF deployments. (BG/ARG/PACMEF will hereafter be referred to as Battle Force or Battle Forces). This process is applicable to all shipboard combat systems, C4I system installations, Programs of Record (POR), and upgrades, including Ship Alterations (SHIPALT), engineering and field changes programmed under the Fleet Modernization Program (FMP), Ordnance Alterations (ORDALT), emergent C4I upgrades, Advanced Concept Technology Demonstrations (ACTD), and Operational Proof of Concepts. FLTCINC in this instruction refers to CINCLANTFLT or CINCPACFLT. Commander Military Sealift Command (COMSC) is treated as a Type Commander (TYCOM) and is involved with this process as all other TYCOMs are.

4. Background. Reference (a) assigned Commander, Naval Sea Systems Command (NAVSEA) responsibility to address combat systems and C4I systems interoperability issues. Reference (b) published the Guidance and Policy Paper (G&PP) 98-03, which provided an interim process for Systems Commands until new instructions are promulgated. This instruction incorporates the tenets of the Deployment minus thirty months (D-30) process from NAVSEA's G&PP 98-03, revises and expands CINCPACFLT/CINLANTFLT 4720.3 to include combat systems, and also adds a detailed section on waiver requirements for non-standard alterations or prototype installations, emergent changes to the final baseline configuration and post Target Configuration Date (TCD) installations. See enclosure (1) for the D-30 timeline and enclosure (2) on details on "A through O" process.

5. D-30 Process. Enclosure (1) describes the D-30 process and outlines the planning process for initiating, approving and scheduling Battle Force combat systems and C4I installations and upgrades. Paragraph 6 addresses allowances for emergent changes to the final baseline configuration due to technology insertion opportunities and emergent operational requirements.

6. Exceptions to the Standard Process. The Combat Systems and C4I systems "Final Baseline Configuration" is established at D-24 and should be installed as early as possible, preferably prior to D-12 to support the Inter-Deployment Training Cycle (IDTC), and always prior to TCD. However, certain situations may prevent the inclusion of requirements identified after Final Baseline configuration (D-24) and/or may require an installation after TCD: emergent requirements, equipment shortages, and ship availability. In addition, there may be a requirement to conduct an operational at-sea test of equipment. To resolve these issues, a formal process is required to assess all the risks associated with doing an installation after TCD. Every installation has potentially negative effects in training, interoperability, etc. The "A-O" process will aid the FLTCINC and other commanders in making the correct assessment of risk, enhancements to war fighting capability, and operational requirement. If, at any time during the process an installation is identified that will not complete prior to the TCD, that installation will require a TCD waiver approved by FLTCINC. An installation is deemed complete when the Systems Operational and Verification Tests (SOVT) have been signed and the completion message has been transmitted. The following exception process will also be used to re-assess requirements at any time it becomes known that a system installation completion date will no longer meet TCD. Requests for non-standard alterations/ prototype installations must allow two weeks for evaluation and response, unless addressing a safety issue. See enclosure (2) for further details.

a. At D-12 system availability and installation schedules should be firm enough to determine the probability of completion prior to TCD. Previously scheduled and approved systems that will no longer be completed by TCD will be re-evaluated by the FLTCINC.

b. Installers will coordinate with the TYCOM for scheduling the installation.

c. Requests for changes to the Final Baseline Configuration from D-24 to TCD(D-6) will be submitted to FLTCINC via NAVSEA 53's electronic-CCB process.

d. Requests for non-standard or post-TCD installations will be made via the A-O message to the FLTCINC. (See enclosure (2) for specifics of how the message should be written.) This message will be submitted by the command which identifies the requirement and will include a description of the war fighting

capability improved in quantifiable terms. NAVSEA 53 will evaluate the impact of the proposed change on Battle Force Interoperability.

e. FLTCINC will coordinate with TYCOMs, Numbered Fleet Commander (NFC), BG commander for CVBG issues, Commander, Amphibious Group (COMPHIBGRU) TWO/THREE for amphibious issues, to determine if non-standard or post TCD installation should occur. Factors that FLTCINC will evaluate are:

(1) Value added for warfighter.

(2) Impact on sailor: Is this upgrade “transparent” or “invasive”?

(3) Amount of training required.

(4) Impact on training plan.

(5) Impact on testing and integration.

(6) Impact if installation does not occur.

(7) Risk.

(8) Proposed installation date.

(9) Extent of upgrade – software patch or new hardware and software.

f. FLTCINC will approve or deny all requests.

g. Installers will coordinate with the TYCOMs (N2, N43 or N6) for scheduling the installation.

7. Systems Integration Testing

a. By reference (a), NAVSEA has the central responsibility to address combat systems and C4I interoperability within the systems commands and to coordinate problem resolution with the fleet. NAVSEA 53 will determine readiness for Preliminary Battle Force Interoperability Certification at D-7 and for Final Certification at D-2. The criteria for achieving Battle Force Interoperability certification are specified in reference (b).

b. Within the Battle Force Interoperability certification process, completion of platform-level certification testing and a Fleet Delivery Readiness Review (FDRR) provide the mechanism for ensuring combat systems, C4I elements and data links are ready for introduction into individual ships, submarines, and aircraft. Battle Force Integration Testing (BFIT), conducted using the Distributed Engineering Plant (DEP), provides the basis for preliminary Battle Force Interoperability certification. In addition, the BFIT provides initial validation of the BG OPTASK LINK, the BF Capabilities and Limitations documentation, and other procedures designed to mitigate known interoperability problems. Final Battle Force Interoperability certification will be based on the resolution of identified interoperability problems.

c. The validation and quality assurance process is essential to the successful Battle Force employment of combat and C4I systems. An installation or upgrade will not be considered complete until its SOVT and appropriate systems integration testing are successfully accomplished. To ensure overall battle force system performance and interoperability among interfacing systems in an

operational environment, the FLTCINC Battle Group System Integration Testing (BGSIT) process is to be conducted on these deploying groups in accordance with reference (c). This process includes BGSIT/ARGSIT Final Integration Testing (FIT), which is conducted post-TCD at sea and evaluates the Battle Force interoperability and integration of combat systems and C4I systems. The integration team effort is to be coordinated by the appropriate Battle Force commander supported by TYCOMs, Immediate Superiors in Command (ISIC), Program Managers, Field Activities, etc., and tailored to identified needs of the particular Battle Force.

8. Unique Deployers. Certain ships, such as those forward deployed, or those making different deployments and are not part of a Battle Force, such as Joint United States-Latin American Naval Exercise (UNITAS), MIWRG, or counter-drug operations, may use some of the tenets of this instruction. For example, it may not be possible to do a full land-based testing, nor will it be possible to execute a full D-30 process for those ships that are forward-deployed overseas. In these cases, the FLTCINC in coordination with the TYCOMs and NAVSEA 53 will mutually agree on how much of this process will be incorporated.

9. Responsibilities

a. FLTCINC

(1) Promulgates Battle Force or deploying force composition message (D-30).

(2) Attends the Initial Baseline Review (D-28) if desired.

(3) Tasks TYCOMs/Commander Marine Forces (COMMARFOR) to review Initial Baseline Configuration (D-27).

(4) Incorporates the TYCOMs'/COMMARFOR's responses and forwards the Initial Baseline Configuration to Unified CINCs, NFCs, BG commanders, COMPHIBGRU, Commanding General, Marine Expeditionary Force (CG MEF), requesting changes, additions, and deletions (D-27).

(5) Forwards prioritized additional and unfunded requirements to OPNAV, information to Systems Commanders (SYSCOMs) and Program Executive Officers (PEOs) (D-27).

(6) Promulgates the Baseline Review Board (BRB) membership by name (D-26).

(7) Chairs the Pre-Deployment Planning Conference and then, as a result of that conference, forwards the Deployment Baseline Configuration to SYSCOMs and PEOs (D-25).

(8) Chairs the Deployment Planning Conference (D-24) and approves the Final Baseline Configuration.

(9) Approves or disapproves the Battle Force Change Control Board (BF CCB) recommendations (D-24 – D-0).

(10) Populates the Integrated Battle Force Training Database (D-24).

(11) Receives installation and status updates briefs from Commander, Space and Naval Warfare Systems Command (SPAWAR), NAVSEA, Commander, Naval Air Systems Command (NAVAIR), and other SYSCOMs as appropriate on a weekly basis on video tele-conference (VTC). Receives and reviews SYSCOMs' update of POA&Ms required in reference (d)(D-24 through D-1).

(12) Receives Battle Force training status and requirements from SYSCOMs/PEOs/BF (D-20).

(13) Promulgates Battle Force ashore training plan (D-18).

(14) Chairs Pre-TCD Conference (D-10 - D-7). Provides and coordinates action items from review.

(15) Approves or disapproves TCD waivers (D-9 – D-1).

(16) Conducts BGSIT process in accordance with reference c (D-5 - D-4).

(17) Deploys Battle Force (D).

b. OPNAV

(1) Reviews request for additional unfunded requirements (D-26).

(2) Responds to request for additional unfunded requirements provided by FLTCINCs(D-25).

(3) Attends the Pre-Deployment Planning Conference (D-25).

(4) Attends Deployment Planning Conference and is a voting member of the BRB (D-24) and BF CCB (as required) (D-24 – D).

(5) Attends weekly VTC by SYSCOMs (D-24 – D-0).

c. TYCOMs (COMNAVSURFLANT/PAC, COMNAVAIRLANT/PAC, COMSUBLANT/PAC, COMMARFORLANT/PAC, COMINEWARCOM, COMSCLANT/PAC)

(1) Attend Initial Baseline Review, when required (D-28).

(2) Review Initial Baseline Configuration and provide to FLTCINC a list of planned cross decks and installations. Initiate a prioritized request to FLTCINC to identify sponsor for validated but unfunded requirements (D-27).

(3) Attend the Pre-Deployment Planning Conference (D-25).

(4) Attend the Deployment Planning Conference and is a voting member of the BRB (D-24) and BF CCB (D-24 – D-0).

(5) Promulgate ship availability to SYSCOMs and PEOs in order to facilitate installation and training windows (D-24).

(6) Attend weekly VTC by SYSCOMs (D-24 – D-0).

(7) Review BATGRU Battle Force training requirements (D-20).

(8) Review BATGRU Battle Force afloat training plan (D-12).

(9) Attend Pre-TCD Conference (D-10 – D-7).

(10) Evaluate all TCD waiver proposals and makes recommendations to FLTCINC (D-9 through D-1).

d. Numbered Fleet Commander (NFC) (COMSECOND/THIRDFLT)

(1) Reviews the Initial Baseline Configuration (D-27).

(2) Attends the Pre-Deployment Planning Conference (D-25).

(3) Attends the Deployment Planning Conference and is a voting member of the BRB (D-24) and BF CCB (D-24 – D).

(4) Attends the weekly VTC by SYSCOMs (D-24 through D-0)

(5) Receives review of all training requirements by Battle Force (D-20).

(6) Reviews Battle Force afloat training plan (D-12)

(7) Evaluates all TCD waiver proposals and makes recommendations to FLTCINC.

(8) Conducts advanced training with Joint Task Force Exercise (JTFEX) or Fleet Exercise (FLEETEX) (D-2).

e. Theater Navy Commanders. Review Proposed Baseline Configuration and submit comments to FLTCINC (D-27).

f. SYSCOMs and PEOs. SPAWAR, NAVAIR, and NAVSEA, Commander, Naval Supply Systems Command (NAVSUP), Commander Marine Corps Systems Command, (COMMARCORSYSCOM), PEOs, Bureau of Naval Personnel (BUPERS), Bureau of Medicine (BUMED), and Direct Reporting Program Managers (DRPM).

(1) Identify Proposed Baseline Configuration via electronic query (D–29).

(2) Attend Initial Baseline Review (D-28).

(3) Review requests for unfunded requirements (D-27).

(4) Present draft Deployment Baseline Configuration at Pre-Deployment Planning Conference (D-25).

(5) Brief the BRB at the Deployment Planning Conference (D-24). SPAWAR 04 and NAVAIR 4.0 are voting members of the BRB.

(6) SPAWAR 05 serves as the deputy chair of the BF CCB (D-24 – D). NAVAIR 4.0 is a voting member of the BF CCB.

(7) Submit waiver request messages for exceptions to the final baseline configuration to the BF CCB (D-24 – D) and TCD waiver offer messages FLTCINC (D-9 - D)

(8) Promulgate plan of action and milestones (POA&M) for installation (D-24).

(9) Brief FLTCINC, TYCOMs, and NFC on a weekly basis via VTC (D-24 through D).

(10) Provides Battle Force training status and requirements to FLTCINC (D-20).

(11) Begin systems integration testing (D-18).

(12) Complete systems integration testing (D-13).

(13) PEOs will coordinate the software deliveries with all appropriate organizations and provide delivery details by naval message when exact dates are known (D-13 – D-6).

(14) SYSCOMs and PEOs BFIT (shore site testing using DEP)(D-12).

(15) Submit feedback to FLTCINC per enclosure (5) (D+2).

g. NAVSEA 53

(1) Consolidates and distributes Proposed Baseline Configuration (D-29).

(2) Holds Initial Baseline Review to review the Proposed Baseline Configuration. As a result of this review, NAVSEA 53 establishes the Initial Baseline Configuration. NAVSEA 53 will also transmit a message to FLTCINC, which lists all installations planned to be accomplished and announces the posting of the Initial Baseline Configuration on a NAVSEA website (D-28).

(3) Promulgates BF CCB members by name (D-25).

(4) Acts as deputy chair for BRB at the Deployment Planning Conference (D-24).

(5) Chairs the Battle Force Configuration Planning Group (BF CPG) which meets quarterly (D-21 – D-12).

(6) Conducts Combat Systems Integration Testing (CSIT) (D-18).

(7) Conducts ship FDRR (D – 13).

(8) Conducts Final BFIT Readiness Review (test readiness review for shore site using DEP)(D-13).

(9) Conducts BFIT (D-12).

(10) Produces the Capabilities and Limitations document (Preliminary at D-7 and final at D-2).

(11) Certifies the BF is ready for deployment (Preliminary at D-7 and final at D-2).

h. BG Commander

(1) If tasked, reviews BG Initial Baseline Configuration and submit prioritized list (D-27)

(2) If tasked, attends Pre-Deployment Planning Conference (D-25).

(3) Attends weekly VTC as required (D-24 – D-0).

(4) Reviews all training requirements of Integrated Battle Force Training (IBFT) database and present results to TYCOMs and CINC (D-20).

(5) Begins IDTC with Basic Ashore Phase and individual proficiency training (D-18).

(6) Presents afloat training plan to NFC, TYCOM, and FLT CINC and begin training on team proficiencies (D-12).

(7) Attends Pre-TCD Conference (D-10 to D-7).

(8) Evaluates all TCD waiver proposals and makes recommendations to FLTCINC (D–9 to D-1).

(9) Provide feedback on D-30 process to FLTCINC, TYCOM, and NFC per enclosure (5) (D+2).

i. COMPHIBGRU TWO/THREE

(1) If tasked, reviews Initial Base Line Configuration and submit prioritized list to TYCOM (D-27).

(2) If tasked, attends Pre-Deployment Planning Conference (D-25).

(3) Attends weekly VTC (D-24 – D).

(4) Reviews all training requirements of IBFT database and present results to TYCOMs, NFC, and FLTCINC (D-20).

(5) Begins IDTC with Basic Ashore Phase and individual proficiency training (D-18).

(6) Presents ashore training plan to NFC, TYCOM, and FLTCINC (D-18).

(7) Presents afloat training plan to NFC, TYCOM, and FLTCINC and begin training on team proficiencies (D-12).

(8) Attends Pre-TCD Conference (D-10 to D-7).

(9) Evaluates all TCD waiver proposals and makes recommendations to TYCOM (D–9 to D-1).

j. COMPHIBRON

(1) Attends Pre-TCD Conference (D-10 to D-7).

(2) Evaluates TCD offer proposals for ARG and makes recommendations to COMPHIBGRU (D–6 to D-1).

(3) Provides feedback on D-30 process to FLTCINC, TYCOM, and NFC per enclosure (5) (D+2).

k. MEU

(1) Evaluate TCD waiver proposals that effect the MEU, and makes recommendations to TYCOM (D-6 to D-1).

(2) Provide feedback on D-30 process to FLTCINC, TYCOM, and NFC per enclosure (5)(D+2).

A. G. HARMS
Deputy and Chief of Staff

T. W. LAFLEUR
Deputy and Chief of Staff

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COMNAVSURFLANT (N6, N2, N43, N02C)
COMNAVAIRLANT (N6, N2, N435, N02C)
COMSUBLANT (N6, N2, N42, N02C)
COMMARFORLANT (G6)
CG II MEF
COMPHIBGRU TWO (N6, N2)
COMCRUDESGRU TWO
COMCRUDESGRU EIGHT
COMCRUDESGRU TWELVE
COMCARGRU TWO
COMCARGRU FOUR
COMCARGRU SIX

COMCARGRU EIGHT
USCOMSOLANT
COMINEWARCOM (N2/6)
COMSCLANT (N7, PM-1)
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COMPHIBRON FOUR
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COMPHIBRON ELEVEN
ELEVENTH MEU
THIRTEENTH MEU
FIFTEENTH MEU
THREE ONE MEU

D – 30 Timeline

This enclosure outlines the planning process for initiating, approving and scheduling Battle Force combat systems and C4I installations and upgrades:

Month	Event
D - 30	FLTCINC promulgates Battle Force composition message to other FLTCINCs, Theater CINCs, NFC, SYSCOMs, PEOs, TYCOM, and MARFORLANT or PAC. This message should also include all deployers, including UNITAS and MIWRG. The unclassified composition message will identify the: - Commanders: BG, Destroyer Squadron Commander, PHIBRON, and PACMEF Commander. - Carrier Air Wing, - MEU, - Ships and submarines by hull number, - deployment dates and TCD, and - Ships within five years of decommissioning (based on input from OPNAV)

Note: Every effort will be made by the FLTCINC not to change the TCD. However, this will be dictated by operational requirements.

D - 29	1. SYSCOMs and PEOs identify Proposed Baseline Configuration. 2. Based on inputs from SYSCOMs and PEOs, NAVSEA 53 will consolidate and distribute Proposed Baseline Configuration.
D – 28	1. NAVSEA 53 holds Initial Baseline Review, attended by SYSCOMs and PEOs, to review the Proposed Baseline Configuration. (FLTCINC and TYCOMs attend as they desire). As a result of the review, NAVSEA 53 establishes the Initial Baseline Configuration. NAVSEA 53 will also transmit a message to FLTCINC, information to CNO, theater commanders, TYCOMs, and NFCs which lists all installations that will be accomplished prior to the deployment. This message announces the posting of the initial baseline configuration on a NAVSEA website. Message to include: a. POR installs b. Installations for ACTD or operational proof of concept must include deinstallation and system/ship restoration funding in the request message (reference d).
D - 27	1. FLTCINC tasks TYCOMs/MARFOR to review Initial Baseline Configuration. TYCOMs/MARFOR provide FLTCINC a list of TYCOM/MARFOR planned and funded cross-decks and installs and initiate a prioritized request to FLTCINC which identifies requirements not included (unfunded) in the Initial Baseline Configuration.

2. FLTCINC incorporates the TYCOM's/MARFOR's response and forwards Initial Baseline Configuration to Theater CINCs, NFCs, andCG MEF requesting changes, additions, and deletions. All changes must be valid requirements. Depending on the situation, the FLTCINC may task COMPHIBGRU (representing COMPHIBRON) or the BG commander, to review the configuration.

3. FLTCINC forwards prioritized additional and unfunded requirements to OPNAV, information to SYSCOMs and PEOs.

D – 26

1. OPNAV, SYSCOMs and PEOs review requests for additional and unfunded requirements.

2. FLTCINC promulgates BRB members by name (see enclosure (3) for details.)

D – 25

1. OPNAV responds to the FLTCINC's request for unfunded requirements.

2. SYSCOMs and PEOs present a draft Deployment Baseline Configuration at Pre-Deployment Planning Conference to FLTCINC, TYCOMs/COMMARFOR, respective NFC, and respective COMPHIBRU and BG commander if tasked. The outcome of the Pre-Deployment Planning Conference is the CINC forwarding the fleet supported Deployment Baseline Configuration to SYSCOMs and PEOs.

3. NAVSEA 53 promulgates BF CCB members by name (enclosure (4)).

D – 24

1. SYSCOMs and PEOs brief the BRB at the Deployment Planning Conference. This flag level board chaired by FLTCINC approves the Final Baseline Configuration, which is placed under the BF CCB configuration management. Henceforth, the BF CCB will control the combat systems and C^4I configuration for the battle force through an "Exception Process" for emergent requirements. See enclosure (4) for additional details on the BF CCB.

2. TYCOMs provides ship availability to SYSCOMs and PEOs in order to facilitate installations.

3. SYSCOMs and PEOs promulgate POA&M for installation, including required schools, amount of on board training required, specific NECs and associated manning levels, and training audience. The message will include list of Points of Contacts (POC) for quota control or provider for scheduled training, i.e., contractor or Chief of Naval Education and Training (CNET).

4. The Battle Force Configuration Planning Group (BF CPG), which is chaired by NAVSEA, will meet quarterly until the shore testing begins.

5. FLTCINC populates the Integrated Battle Force Training database.

6. On a weekly basis, SPAWAR, NAVAIR, NAVSEA and other SYSCOMs as appropriate, will brief FLTCINC, NFC, TYCOMs and others as desired via VTC installation and status updates to their programs.

D – 20 1. Battle Forces/ISICs review training requirements of IBFT database and coordinate with chain of command to complete.

D – 18 1. FLTCINC promulgates Battle Force ashore training plan.

2. Battle Forces begin IDTC with Basic Ashore Phase and individual proficiency training.

3. SYSCOMs and PEOs begin systems integration testing. (Fleet involvement invited, but is not required.)

D – 13 1. SYSCOMs and PEOs complete systems integration testing.

2. NAVSEA 53 conducts ship FDRR.

3. NAVSEA 53 conducts Final BFIT Readiness Review (test readiness review for shore site testing using DEP).

4. A software delivery will be conducted after the FDRR. The exact timing of the software deliveries will be based on the results of the FDRR, ship schedules, and resource availability. PEOs will coordinate the software deliveries with all appropriate organizations and provide delivery details by naval message when exact dates are known.

D – 12 1. SYSCOMs and PEOs begin BFIT.

2. SYSCOMs promulgate update message providing final status of installations.

3. Battle Force presents afloat training plan to NFC, TYCOMs, and FLTCINC. Battle Forces begin training on training team proficiencies.

D – 10 1. FLTCINC holds Pre-TCD Conference. Battle Forces brief final combat systems and C4I configuration to NFC, TYCOMs with SYSCOMs. SYSCOMs provide feedback to issues. Briefs on security and BGSIT/Amphibious Ready Group System Integrated Testing (ARGSIT) provided to Battle Forces. This conference is for each Battle Force to brief install/ training status, concerns and any additional install/ training requests to fix shortfalls noted. TYCOM will promulgate updated combat systems and C4I upgrade/training status resulting from conference. The Battle Force shall brief latest on installations, training, local area network (LAN) security, BG and ARGSIT, etc.

D – 7 1. NAVSEA 53 produces preliminary Capabilities and Limitations document based on successful testing.

2. NAVSEA 53 produces preliminary Battle Force Interoperability ertification.

D – 6 1. TCD occurs.

2. SYSCOMs and PEOs should have completed all scheduled combat systems and C^4I upgrades by TCD. Earlier completion is always encouraged. All subsystems including SOVT/Combat System Readiness

Review (CSRR) testing, training and logistics provisions should be complete.

3. IDTC unit level training under TYCOMs ends and group level training begins.

4. FLTCINC conducts BG/ARGSIT readiness review. (CINCPACFLT only)

D – 5 **1.** Conduct Composite Training Unit Exercise (COMPTUEX) and BGSIT FIT in accordance with process established in reference c. For Forward Deployed Naval Forces in PACFLT, BGSIT FIT will occur biannually during a schedule promulgated in accordance with reference (c).

D – 2 1. NAVSEA 53 promulgates final Capabilities and Limitations document

2. NAVSEA 53 technically certifies the battle force ready for deployment, focusing on the safety and interoperability of the equipment in a battle force setting. This certification differs significantly from the NFC's operational certification of the Battle Force.

3. NFC conducts advanced training, via FLEETEX and JTFEX.

D – 1 **1.** IDTC group level training ends and Pre-Overseas Movement (POM) commences.

D FLTCINC deploys Battle Force.

D + 2 **1.** Battle Force and SYSCOMs provides feedback to FLTCINC, TYCOM, and NFC on D-30 process including comments on training, installation process, logistics, etc. The Battle Force should comment on how the process prepared them to deploy. See enclosure (5) for details.

"A – O" Process

1. The "A through O" process is adapted from the CLF 241201Z JUL 98 message which stated that all future installations had to be approved based on the paragraphs A through O. Paragraphs 2 through 6 gives the details of the A – O process; paragraph 7 gives the format of the "A–O message." The A-O process will apply to all non-standard and post-TCD installations.

2. Messages from the BG commander, PHIBRON commander, MEFSAG commander, will use message subject line "TCD WAIVER REQUEST." The message should be sent to FLTCINC, information to NFC, the appropriate TYCOM, SYSCOM or PEO, and COMNAVSEASYSCOM 53. Any commander will generally have veto authority. The FLTCINC will coordinate responses between all concerned.

3. Messages from a SYSCOM or a PEO will use the subject line "TCD OFFER MESSAGE." The message should be sent to FLTCINC, information to the NFC, respective TYCOMs, appropriate operational chain of command, and to NAVSEA 53. (For example, to the BG commander for CVBG issues, to COMPHIBGRU TWO/THREE for amphibious issues, to COMINEWARCOM and the Mine Counter Measures Squadron (MCMRON) Commander for MIWRG issues, and to the appropriate ship, submarine, or aircraft squadron.) If request is post-TCD and affects the ARG, the request must also be sent information to the appropriate COMPHIBRON and MEU commander. Any commander will generally have veto authority. The FLTCINC will coordinate response between all concerned.

4. For non-standard installs, use paragraph 3 procedures except subject of message is "NON-STANDARD INSTALL OFFER MESSAGE."

5. The FLTCINC will make the final determination based on inputs from the TYCOM for a training and material perspective, from the NFC, the battle group commander or amphibious group commander for an operational perspective, and from NAVSEA 53 from a technical, interoperability standards perspective. Factors that FLTCINC will evaluate are:

a. Specifically, what is the added operational value for the warfighter? Does the warfighter, (not program manger), require this installation, or is this a "nice to have"?

b. What is the operational impact on the warfighter if the proposed installation does not occur?

c. What is the impact on operator and maintainer? How much additional training is required? Is the training available?, and, if so, how is it to be delivered? Is this upgrade transparent" or "invasive"?

d. What is the difficulty and risk of installation? Is this the first time this installation has been accomplished?

e. When is the proposed installation to be installed with respect to the operational schedule? For example, will this installation occur prior to COMPTUEX or PHIBRON-MEU Integration, or after JTFEX?

f. What is the extent of upgrade – Is this a software patch or new hardware and software?

g. Is this a standalone system or interoperable with other key systems? If interoperable, does NAVSEA 53 concur?

h. Is the change Safety related?

i. Does the change affect manning or workload?

j. Is the change logistically supported (i.e. drawings, technical manuals, onboard repair parts, etc.)?

6. Engineering development models may request multiple deliveries in a single blanket request message, with information as specified in paragraph 7, indicating a scheduled period and end-date, in order to provide more flexibility to engineering efforts.

7. The following is the “A – O” message format:

a. Identification of change/title

b. Type of change (hardware, software, and firmware)

c. Purpose of change “For TCD waivers, include statement why installation is occurring after TCD. This could be insufficient time to test, correction for discrepancy, lack of funding, new capability, etc.”

d. Operational impact if not installed

e. Prerequisite requirements

f. Testing accomplished for approval/certification by appropriate technical agent (NAVSEA, SPAWAR, PEOs, etc.) prior to the request.

g. Schedule (to include length of time for temporary installations).

h. Integrated logistics support requirements

i. Training requirements

j. Impact to existing systems

k. Risk assessment

l. Contingency (options/fall back)

m. Documentation requirements

n. Interoperability impact

o. Point of contact and phone number

Baseline Review Board (BRB)

Purpose. The BRB is tasked with establishing the Final Baseline Configuration for a given battle force.

Background. The BRB, a FLTCINC chaired board, is nominated at D-26 and is established at D-24. In the past there has been numerous discussions even up to the deployment date of what would be the configuration of the battle force. By establishing this board, the flags will decide early enough in the Inter-deployment Training Cycle, the Final Baseline Configuration. Once the flags decide what the configuration is, then the emphasis will be on execution of that plan under the management of the BF CCB.

Membership:

Chairman: FLTCINC (flag level)
Deputy Chairman: NAVSEA 53

Representatives of the following organizations (voting members)

OPNAV N6/N8
SPAWAR 04-
NAVAIR 4.0
2nd or 3rd Fleet

TYCOMs:	COMNAVSURFLANT or PAC	COMNAVAIRLANT or PAC
	COMSUBLANT or PAC	MARFORLANT or PAC
	COMINEWARCOM (for MIWRG)	COMSC WASHINGTON DC (for MSC ships)

Following ad hoc non-voting members support as required:

Program Offices, PEOs, and Direct Reporting Program Offices
Others as requested by the chairman.

Battle Force Change Control Board (BF CCB)

Purpose: The BF CCB is tasked with evaluating proposed changes to the Final Baseline Configuration.

Background: Once the Final Baseline Configuration is established, a disciplined process is invoked to evaluate proposed warfighting benefit versus technical, schedule, and programmatic risk. The Chairman of the BF CCB forwards the boards recommendation to the respective FLTCINC, who as the ultimate authority, can accept or reject the board's recommendation.

Membership:

Chairman:	NAVSEA 53
Deputy Chair:	SPAWAR 05
Final Decision authority:	FLTCINC

2^{nd} or 3rd Fleet
OPNAV N6/N8
NAVAIR 4.0
TYCOMs:

COMNAVSURFLANT or PAC	COMNAVAIRLANT or PAC
COMSUBLANT or PAC	MARFORLANT or PAC
COMINEWARCOM (for MIWRG)	COMSC WASHINGTON DC (for MSC ships)

Following ad hoc non-voting members support as required:
Program Offices, Program Executive Offices, and Direct Reporting Program Offices. Others as requested by the chairman.

Process: Proposed changes to the Final Baseline for a given Battle Force should be brought to the attention of NAVSEA 53 for CCB consideration. Additionally, the FLTCINC may convene a CCB to consider an emergent requirement, late changes to Battle Force composition, or to evaluate installations that may violate the established TCD.

The BF CCB will consider each change proposal on an individual basis. The CCB is not a vehicle for shortcutting required system testing and certification. Systems requiring certification (software, weapon system safety, flight deck, etc.) must be certified before they can be fielded.

Additionally, systems that are critical to BF interoperability (e.g., LINKs, command and control systems) must be reviewed for battle force interoperability testing and certification.

NAVSEA 53 maintains a Risk Assessment Questionnaire that will guide the BF CCB process. The goal is to conduct BF CCBs electronically, at the discretion of the Chairman. Representatives for the system being proposed to the CCB shall answer all questions of the Risk Assessment prior to CCB presentation. This will enable the CCB to focus on areas of risk and evaluate risk versus warfighting benefit.

BF CCB recommendations include:

- Approval or disapproval of the proposed installation/upgrade.
- Conditional approval of the proposed change pending completion of a board assigned action (e.g., additional testing, Ship Installation Drawing/Ship Alteration Request approval, mitigation of electro-magnetic interference, certification of integrated logistic support, etc.)

Minutes of the BF CCB, including the final recommendation will be signed by NAVSEA 53 and forwarded to the respective FLTCINC. The FLTCINC is the approval authority.

D+2 Feedback

1. This enclosure provides details for making an assessment of the D – 30 process and for the success of installing the improvements on the ships, submarines, and aircraft.

2. SYSCOMs provide following information at D + 2:

System		At D-18		D - 0	
		Projected Completion Date	Projected Cost	Actual Completion Date	Actual Cost
ABC		MONTH YR	$$	MONTH YR	$$
	Description of outstanding SOVT discrepancies at D+2 (if applicable)		POAM to resolve		

Actual completion date includes successful SOVT. If install was completed post-TCD, it must be highlighted.

3. BG commander and PHIBRON commander provide the following information:

a. At D+2 send message with following data.

System	When CASREPed	When CASCORed	Was Tech Assist Required?

Note: Above data is required only for new installs or upgrades, i.e., for those items identified in the Final Baseline Configuration and CASREPed from TCD to D+2. Do not include CASREPs on existing systems if the CASREP was not related to an upgrade.

b. Post-deployment brief should assess the new capabilities.

4. Any comments by any command on the process, e.g., quality of install, training, ease of keeping informed, etc., are welcome at any time in the process.

Acronyms

ACTD	Advanced Concept Technology Demonstration
ARG	Amphibious Ready Group
ARGSIT	Amphibious Ready Group System Integration Testing
BF	Battle Force
BF CCB	Battle Force Change Control Board
BFIT	Battle Force Integration Test
BG	Battle Group
BGSIT	Battle Group System Integration Testing
BRB	Baseline Review Board
BUMED	Bureau of Medicine
BUPERS	Bureau of Naval Personnel
C4I	Command, Control, Communications, Computer, and Intelligence
CG MEF	Commanding General, Marine Expeditionary Force
CINCLANTFLT	Commander in Chief, U.S. Atlantic Fleet
CNET	Chief on Naval Education and Training
CNO	Chief of Naval Operations
COMMARCORSYSCOM	Commander, Marine Corps Systems Command
COMMARFOR	Commander, Marine Forces
COMPTUEX	Composite Training Unit Exercise
CINCPACFLT	Commander in Chief, U.S. Pacific Fleet
CPG	Configuration Planning Group
CSD	Consolidated Software Deliveries
CSIT	Combat System Integration Testing
CSRR	Combat System Readiness Review
CVBG	Carrier Battle Group
DEP	Distributed Engineering Plant
DRPM	Direct Reporting Program Managers
DESRON	Destroyer Squadron
FDRR	Fleet Delivery Readiness Review
FIT	Final Integration Testing
FLEETEX	Fleet Exercise
FMP	Field Management Plan
G&PP	Guidance and Policy Paper
IBC	Initial Baseline Configuration
IBFT	Integrated Battle Force Training
IDTC	Inter-Deployment Training Cycle
ISIC	Immediate Superior in Command
JTFEX	Joint Task Force Exercise
LAN	Local Area Network

MCMRON	Mine Counter Measures Squadron
MEF	Middle East Force
MEFSAG	Middle East Force Surface Action Group
MEU	Marine Expeditionary Unit
MIWRG	Mine Warfare Readiness Group
NAVSUP	Naval Supply Systems Command
NFC	Numbered Fleet Commander
NMIMC	Navy Medical Information Management Command
PACMEF	Pacific Middle East Force
PEO	Program Executive Officer
PHIBGRU	Amphibious Group
PHIBRON	Amphibious Squadron
POA&M	Plan of Action & Milestones
POR	Program of Record
ORDALT	Ordnance Alteration
SHIPALT	Ship Alteration
SOVT	System Operation Verification Testing
SYSCOM	Systems Command
TCD	Target Configuration Date
TYCOM	Type Commander
UNITAS	Joint United States-Latin American Naval Exercise
VTC	Video Tele-Conference

APPENDIX D

Warfare Systems Guidance and Policy (G&PP) No. 99-05

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
2531 JEFFERSON DAVIS HWY
ARLINGTON VA 22242-5160

IN REPLY REFER TO
9400
Ser 05/9059
21 May 1999

WARFARE SYSTEMS GUIDANCE AND POLICY PAPER NO. 99-05

From: Deputy Commander, Warfare Systems Directorate

Subj: SOFTWARE QUALITY IMPROVEMENT (SQI) PROGRAM

Ref: (a) AEGISINST 4850.2 AEGIS Lifetime Support Engineering and Training Responsibilities
(b) PEO MIW Software Development Plan
(c) NAVSEAINST 9093.2, Submarine Combat System Test and Certification Program
(d) NAVSEA 05 Guidance and Policy Paper 98-03, Battle Force Interoperability Certification Process of 4 Aug 98
(e) Procedures Guide for Coordination Planning Group Meetings and Flag Level Reviews
(f) NAVSEA 05 Guidance and Policy Paper 99-06, Combat System Software Change Control Board of 20 May 99
(g) MIL-STD 498/SSQ/IEC DIS 12207, Software Development and Documentation
(h) ISO 9001, Quality Systems
(i) ANSI/IEE Standard 1028, Standard for Software Review and Audits
(j) DOD 5000.2, Defense Acquisition Management Policies and Procedures
(k) NAVSEAINST 3560.1, Delivery of Naval Embedded Computer Programs of 21 Dec 84

Encl: (1) Platform Test Readiness Review (PTRR) Meetings
(2) Coordination Planning Group (CPG) Meetings
(3) Flag Level Readiness Reviews (FLRR)
(4) Glossary of acronyms and abbreviations

1. Purpose. This G&PP provides an update to the existing NAVSEA Software Quality Improvement (SQI) Program which promotes senior management assessment of combat system computer program development efforts and formally implements the certification process for combat system computer programs scheduled for delivery

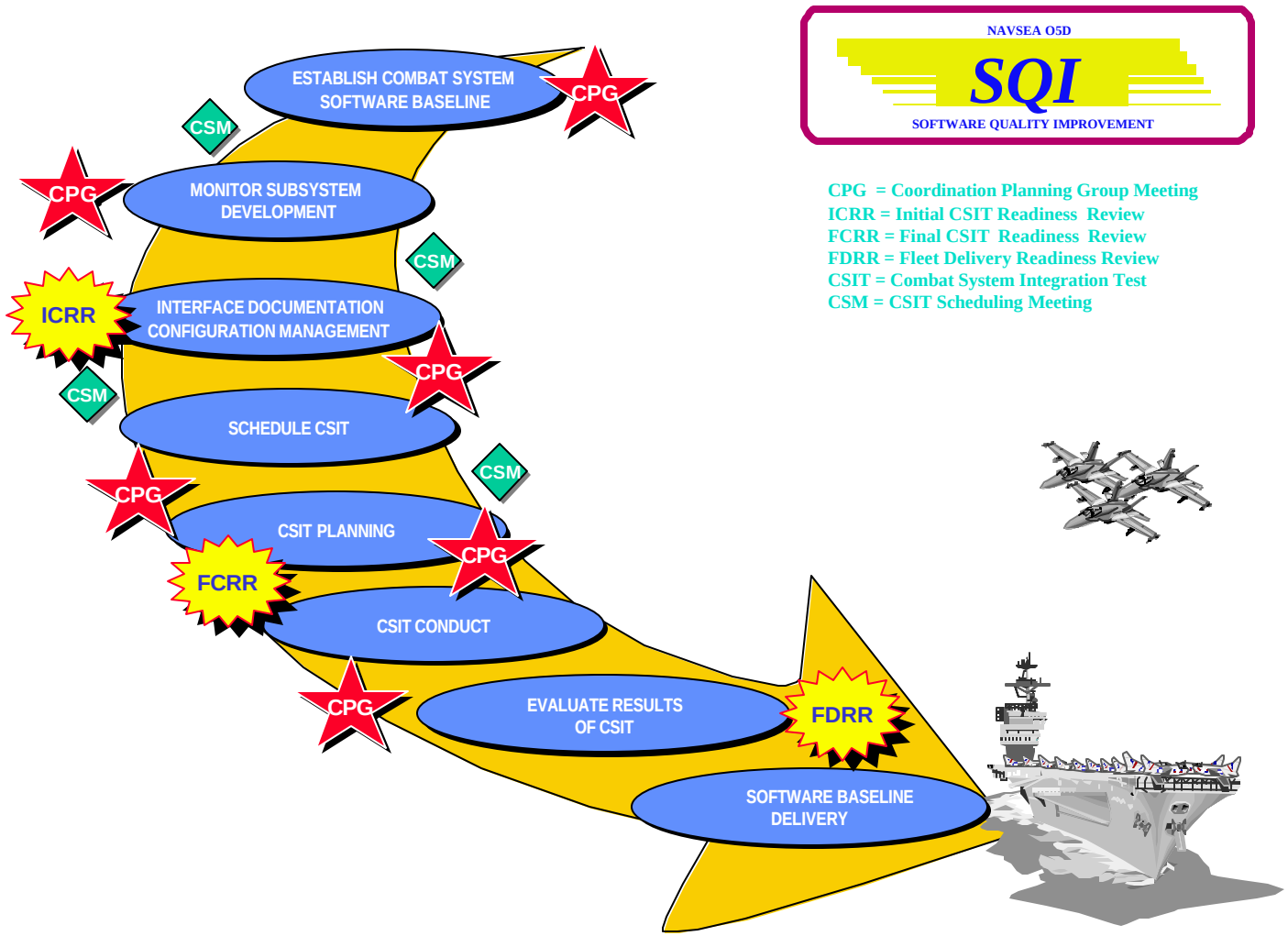
for Fleet operational use and Battle Force (CVBG, ARG, FDNF, MEF) fighting unit deployments.

2. Cancellation. NAVSEA 06 Guidance and Policy Paper (G&PP) No. 88-08 (Revision 2) is superceded by this updated SQI G&PP.

3. Applicability. This G&PP is applicable to all integrated or standalone Combat System/Non-Propulsion Electronic (CS/NPE) computer programs developed and delivered to AEGIS CG/DDG, MCM, MHC, SSN/SSBN, CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes. This update includes applicability for AEGIS CG/DDG, installation and use. NAVSEA 08 and Strategic Systems Programs (SSP) cognizant systems are exempt from the requirements of this G&PP.

4. Background. The existing SQI Program has provided NAVSEA senior management with early visibility into computer program development progress and upgrade efforts in non-AEGIS surface combatants since 1988. SQI provides a proven process for conducting system status evaluations and required ship class coordination and readiness review meetings to ensure that combat system computer programs planned for Fleet installation are mature, contain no serious defects and demonstrate system-to-system interoperability. Figure 1 depicts the current SQI process.

Figure 1. SQI and Fleet Delivery Process

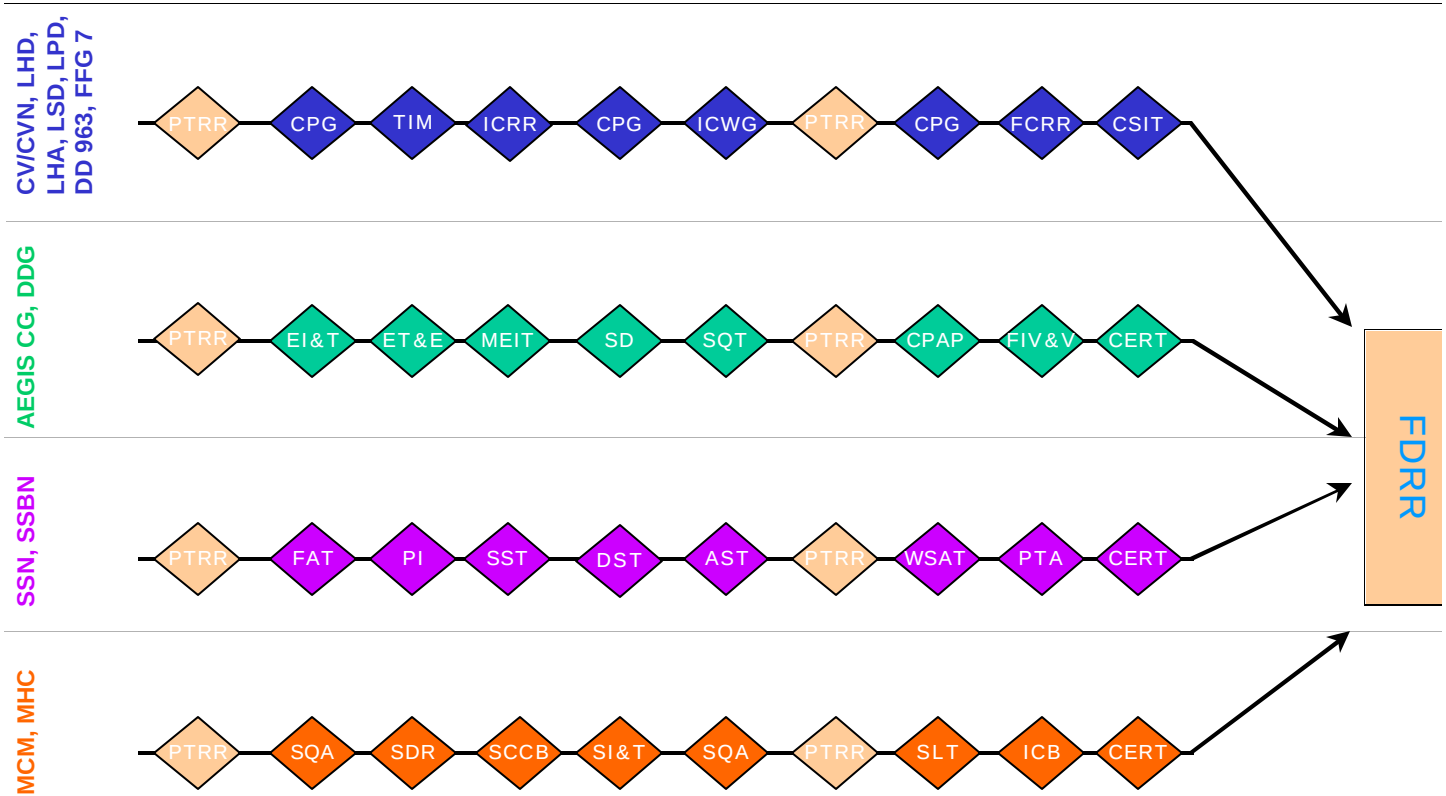


The SEA 05 Warfare Systems Assessment Office and its predecessor SEA 03/06 organizations have overseen the SQI Program since inception. SEA 05 has also been responsible for management of the Combat System Integration Testing (CSIT) program which validates selected non-AEGIS surface ship integrated computer programs at Naval Surface Warfare Center, Port Hueneme Division, Detachment San Diego (NSWC PHD DSD). CSIT demonstrates the functional performance and interoperability of interfaced sensor, weapon, and C^4I computer programs prior to their delivery to the Fleet for operational use. CSIT results have traditionally been used to determine software readiness for tactical operations in CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes and more recently, to certify functional capabilities of computer programs delivered to the Fleet.

As provided in references (a) and (b), similar fully capable test and integration facilities are available for AEGIS CG/DDG, MCM and MHC Classes to validate and certify their combat systems. The SSBN Class and NSSN also have a fully capable Trident Command and Control System (CCS) Life Cycle Support Facility, CCS Module Off-Hull Assembly and Test Site (COATS) and Wide Area Integration Facility (WAIF) and at Naval Undersea Warfare Center (NUWC) Newport, RI. The SSN Class has no fully capable land-based test site and testing is performed during dockside and at-sea periods in accordance with the computer program certification process described in reference (c). The Chief of Naval Operations (CNO) has assigned NAVSEA 05 the responsibility for establishing the processes required to promote interoperability within Battle Force (BF) fighting units to enable BF Commanders to concentrate efforts on crew training during work-ups prior to deployment. To achieve this objective, SEA 05 published G&PP 98-03, Battle Force Interoperability (BFI) Certification Process, reference (d). G&PP 98-03 instituted a Deployment minus 30-month (D-30) timeline for establishing BF baseline configuration control and computer program certification prior to deployment. The existing SQI Program was used as the basis for many of the processes developed for the BGI G&PP, including the certification requirements. The SQI process connection to BFI ensures that new and upgraded platform combat system computer programs are certified prior to the start of land-based Distributed Engineering Plant (DEP) Battle Group Integration Testing (BGIT).

5. Scope. This SQI G&PP provides the process whereby senior management can assess all new and/or upgraded BF combat system computer programs and provide the necessary guidance to ensure certification prior to BGIT. Specifically, this G&PP expands the SQI Program to include the requirement to certify all new and upgraded NAVSEA, NAVAIR, SPAWAR and PEO developed CS/NPE computer programs prior to system installation for platform operational use and BF deployment. AEGIS DDG/CG, SSN/SSBN, MCM and MHC Classes shall continue to use their existing test facilities and combat system level certification processes and are only required to participate in the PTRR and Flag level FDRR meetings described in this G&PP. Figure 2 depicts the expanded scope of SQI process and identifies the major milestones on the path to certification.

Figure 2. Notional Multi-Class Certification Milestones



NON AEGIS		AEGIS		SSN, SBN		MCM, MHC	
PTRR	Platform Test Readiness Review	PTRR	Platform Test Readiness Review	PTRR	Platform Test Readiness Review	PTRR	Platform Test Readiness Review
CPG	Coordination Planning Group	EI&T	Element Integration and Test	FAT	Factory Acceptance Test	SQA	Software Quality Assessment
TIM	Technical Interface Meeting	ET&E	Element Test and Evaluation	PI	Platform Installation	SDR	Software Design Review
ICRR	Initial CSIT Readiness Review	MEIT	Multi-Element Integration Test	SST	Sub-System Test	SCCB	Software Change Control Board
ICWG	Interface Control Working Group	SD	System Demonstration	DST	Dock Side Test	SI&T	System Integration and Test
FCRR	Final CSIT Readiness Review	SQT	System Qualification Test	AST	At-Sea Test	SLT	System Level Test
CSIT	Combat System Integration Test	CPAP	Computer Program Acceptance Panel	WSAT	Weapon System Accuracy Trials	ICB	Installation Control Board
FDRR	Fleet Delivery Readiness Review	FIV&V	Final Interface Verification & Validation	PTA	Post Test Analysis	CERT	Certification
		CERT	Certification	CERT	Certification		

6. Guidance and Policy.

a. The primary method for ensuring that Fleet operational computer programs are fully developed, mature, and reliable prior to delivery is thorough system and integration testing, and program manager participation in frequent coordination meetings and system reviews. Detailed procedures for these meetings are provided in reference (e). SEA 05 requires the following meetings and reviews as part of the SQI process:

(1) Platform Test Readiness Reviews (PTRR). PTRRs are new to the SQI process and are designed to provide an ongoing indication of test readiness and progress. PTRRs will normally be scheduled quarterly concurrent with the CSIT Scheduling Conference to identify scheduling and resource conflicts and may also provide inputs to the Initial Baseline Review conducted as part of the process identified in reference (d). PTRRs may also serve as the initiating action for individual organizational certification processes. PTRRs will be chaired by SEA 05D in order to analyze testing schedules/baselines and establish FDRR dates for all platforms. Enclosure (1) provides additional information on PTRRs.

(2) Coordination Planning Group (CPG) Meetings. CPGs are chaired by the ship class Combat System Engineers (CSE) for the CV/CVN/ LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes to determine combat system development status, planned baseline configurations which will undergo CSIT, test bed requirements, development and testing risks. CPGs are held at least semi-annually. Enclosure (2) provides additional information on CPGs.

(3) Flag Level Readiness Reviews (FLRR). FLRRs are chaired by SEA 05 and review panel members may include PEO Carriers, PEO Expeditionary Warfare, PEO Theater Surface Combatants, PEO Submarines, PEO Satellite and Communications, PEO Mine Warfare, SEA 92 and SEA 05D as required based on the systems under review. SPAWAR and NAVAIR system developers, and Fleet user representatives will be invited to participate in the review process. The program manager for each combat system computer program is required to attend the FLRR unless specifically excused. AEGIS DDG/CG, SSN/SSBN, MCM and MHC Classes are required to participate in only the FDRR. Enclosure (3) provides additional guidance for the conduct of FLRRs.

There are three types of FLRR:

- Initial CSIT Readiness Review (ICRR)
- Final CSIT Readiness Review (FCRR)
- Fleet Delivery Readiness Review (FDRR)

b. SEA 05 shall schedule all required FLRRs, coordinate Flag calendars and document the review proceedings for all ship classes.

c. A Prebrief shall be scheduled by the SEA 05T Technical Director prior to any scheduled FLRR to identify issues to be brought before the Flag review panel. SEA 05T shall determine which program managers shall be required to brief their system status at the FLRR based on program endurance, outstanding problems, known operational issues, results of previous FLRRs, and recommendations of the respective Test Directors.

d. The primary focus of the SQI Program will be upon BF interoperability

and integrated platform systems rather than on standalone systems. However, all CS/NPE computer programs are subject to SQI delivery criteria and standalone systems shall provide system status briefing when requested by SEA 05. Under no circumstance are standalone systems authorized to deliver their computer programs without prior coordination with SEA 05 and the delivery authority for the ship class.

e. Computer programs which are scheduled for integration testing at NSWC PHD DSD must meet SQI criteria for delivery and entry into CSIT. Programs which do not meet the criteria will not be authorized for delivery by the FCRR panel. If an operational requirement dictates software delivery for testing regardless of qualification status, and the risk mitigation plan provided by the program manager is acceptable to the panel, the FCRR may authorize delivery and require the program manager to provide periodic test status reports to ensure that progress is satisfactory. The CSIT delivery SQI criteria is:

- System computer programs have successfully completed Formal Qualification Testing (FQT) or equivalent
- System computer programs have successfully passed a 25-hour stress and endurance test
- System computer programs have zero open high severity (priority 1 or 2) Program Trouble Reports (PTR)

f. CS/NPE computer programs which have successfully completed CSIT or other similar and qualified integration and validation testing, meet the SQI certification criteria for Fleet delivery and have no disqualifying problems, will be certified by the FDRR panel. Computer programs which do not meet the SQI certification criteria identified herein shall not be certified. When an operational requirement dictates software delivery regardless of certification status, uncertified computer programs may be authorized for delivery by the FDRR panel for restricted-use. Such deliveries will be documented with the restrictions imposed and these will be explicitly identified to Fleet users. The Fleet Delivery SQI criteria is:

- System interfaces and functional data exchange operate in compliance with system specifications
- Improved system computer program capabilities and operational performance is demonstrated
- System computer programs have successfully passed a 25-hour stress and endurance test
- System computer programs have zero open high severity (priority 1 or 2) Program Trouble Reports (PTR)

g. The FDRR results, including a summary naval message, will be approved by SEA 05 and shall identify the specific CS/NPE computer programs by unique version number and patch level that are certified for operational use and the class or individual platform to which the certification applies. Restricted-use programs shall be similarly identified, their limitations described and a specific end date for interim authorization for use shall be specified.

h. FDRR certified computer programs shall not be delivered without the established ship class delivery authority's explicit authorization. Such programs are identified as the computer program baseline configuration when authorized for installation and shipboard operation. Any change in the authorized baseline configuration requires SEA 05 approval to ensure the change will not have an adverse impact on Battle Force Interoperability (BFI).

The established delivery authority will authorize the following types computer programs deliveries for Fleet operational use:

(1) Normal (Annual) Delivery. Whenever practical, delivery of computer programs will be coordinated as block updates and all software (computer programs and documentation) will be delivered or mailed to arrive on board ship within a two-to-four day period. This will enable the ship's crew to complete their configuration control tasks as a single event.

(2) Emergency Patch Delivery. When a ship reports a computer program problem which impacts crew or embarked personnel safety, or prevents operation of mission critical capabilities, the system program manager will advise the delivery authority and:

(a) Verify that the problem requires an emergency response; if not, advise the reporting unit when a fix can be expected and of any possible work-around solutions.

(b) Develop and test the program patch that corrects the problem. Obtain SEA 05 and CINC install approval to deliver the fix based on the results of testing, then transmit the fix as expeditiously as possible to the reporting unit and to other ships with the same baseline computer programs.

(c) Determine if the patch applies to other software baselines/ship classes, and if appropriate, recommend a course of action to SEA 05 and the delivery authority.

7. Responsibilities.

a. The Flag level FDRR panel:

(1) The FDRR is responsible for determining which combat system computer programs meet the SQI Fleet delivery criteria in paragraph 6.f. and detailed in enclosure (3), and are certified for delivery to Fleet operating units.

(2) The FDRR panel is responsible for determining whether combat system computer programs which would otherwise qualify for certification but have open high severity Design PTRs or an excessive number of open medium severity PTRs should be certified based on input received at the meeting and perceived risk.

b. The Deputy Commander for Warfare Systems (SEA 05):

(1) SEA 05 is responsible for the NAVSEA SQI Program including formulation of the approval process for computer program deliveries for CSIT, OT&E and shipboard testing, and for establishing SQI computer program certification criteria.

(2) SEA 05 is responsible for ensuring that the published FDRR minutes and summary certification message identify certified combat system computer programs by system unique version numbers and patch levels.

(3) SEA 05 is responsible for determining the ship class baselines which will undergo CSIT and shall maintain a list of baselines, prioritized by risk, not included on the schedule because of resource limitations to facilitate corrective action if required.

(4) SEA 05 is responsible for establishing the CSIT schedule at the Quarterly CSIT Scheduling Conference based on available funding, CSE baseline configuration management input and BF deployment schedules.

(5) SEA 05 is responsible for determining, in coordination with the ship class CSEs and test site personnel, the combat system test requirements for each ship class baseline scheduled for CSIT.

(6) SEA 05 is responsible for establishing the BGIT schedule in support of BF deployment schedules based on available funding and available DEP test nodes at land-based test sites and ship resources.

(7) SEA 05 is responsible for ensuring that Engineering Change Proposals (ECP) impacting platform combat system and BF interoperability are reviewed and approved by the NAVSEA Combat System Software Change Control Board (CSSCCB), reference (f), to ensure these changes are not implemented without prior coordination with interfacing systems.

c. SPAWAR, NAVAIR, PEO CS/NPE Program Managers:

(1) Program managers are responsible for advanced coordination with SEA 05 when new or upgraded combat system computer programs have completed development, successfully completed element, system and integration testing, and are ready for certification consideration by the FDRR. This includes interaction with the CSSCCB for ECPs that impact combat system interfaces applicable to multiple ship classes.

(2) Program managers are responsible for delivery of mature, fully developed and tested combat system computer programs for CSIT and/or BGIT, and ensuring that their computer programs are developed in compliance with the instructions and standards listed in references (g) through (j).

(3) Program managers are responsible for obtaining specific approval from the established delivery approval authority for the ship class prior to delivery of their certified, or restricted use, combat system computer programs for ship installation.

d. CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Class individual CSEs:

(1) CSEs are responsible for coordinating with SEA 05 to schedule required FLRRs for their ship classes. The CSE shall document the proceedings, action items and decisions reached during these FLRRs and provide the meeting minutes to SEA 05 for review and approval.

(2) CSEs are the Fleet delivery authority for CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes and are responsible for approving computer program deliveries to their ship classes as specified in reference (k). The CSE is also the delivery authority for test versions and engineering development models to their ship class.

(3) CSEs are responsible for managing their ship class combat system baseline configurations scheduled for CSIT based on input received at CPGs and the ICRR/FCRR.

e. Program managers of Rapid Prototype systems or computer programs

requiring OT&E are responsible for advising NAVSEA 05 of their computer program development and installation plans at the earliest possible date, and for participating in appropriate CPGs and FLRRs. Rapid Prototype and OT&E computer programs shall be subjected to CSIT or other integration testing whenever possible. The SQI review process does not alter OT&E readiness requirements.

8. Review Responsibility. SEA 05 is responsible for the currency of this paper. The SQI G&PP shall be reviewed and updated at least once per year.

JOSEPH R. CIPRIANO
Executive Director
Warfare Systems

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PEO USW (PMS411C/Worland, PMS411C11/Olsen)APEX (Hand)
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Techmatics (Brow)
SAIC (Bryan)
SIR (Farmer)

PLATFORM TEST READINESS REVIEW (PTRR)

1. PTRRs are not rigidly structured events but are scheduled and hosted by SEA 05D12 when deemed necessary. Normally, they will be scheduled quarterly concurrent with the CSIT Scheduling Conference and attendance is mandatory for the system program managers or designated representatives of installed combat systems in deploying ship classes. The PTRR will focus on planned system testing and installation of new/upgraded combat systems. Topics will normally include:

a. Determining ship class upgrade plans, installation schedules, combat system configurations, test sites and test schedules.

b. Verifying that interface documentation (IDS, IRS, and IDD) governing data exchange between systems has been approved and is under program manager configuration control.

c. Determining test site simulation/stimulation and test plan/procedure development status.

d. Identifying upgrade, install/testing risks, and risk mitigation plans.

e. Evaluating computer programs delivery schedules to ensure that computer programs planned for delivery to Battle Force (BF) units will occur prior to scheduled BF Target Completion Dates (TCD).

2. PTRR Entry Criteria:

a. Baseline combat system configuration is specified.

b. Combat system requirements and specifications are under program manager’s configuration control.

c. Combat system element, system and integration testing events are planned, supportable and scheduled.

3. PTRR Exit Criteria:

a. Program managers and test personnel have identified all known obstacles to testing the ship class combat systems.

b. Program managers have identified known funding and schedule risk areas and commit to development of risk mitigation plans.

COORDINATION PLANNING GROUP (CPG) MEETINGS

1. Coordination Planning Groups (CPG) are CSE hosted meetings for the CV/CVN, LHD, LHA, LSD, LPD 17, FFG 7 and DD 963 Classes and attendance by system program manager representatives is mandatory. CPGs shall be conducted at least every six months; however, quarterly CPG meetings are recommended for each ship class. The scope of CPGs is broad; topics normally include:

a. Assessing overall development progress and baseline issues of each system's computer programs.

b. Tracking documentation development progress for each system's computer programs.

c. Tracking system's program plans and schedules for Rapid Prototype and OT&E computer programs.

d. Identifying computer program development problem areas, emphasizing problem resolution and risk management for high risk areas.

e. Ensuring that configuration control is exercised over delivery of multiple combat system baselines for land-based and shipboard testing, and to the Fleet for operational use.

f. Reviewing CSIT and test bed install and test schedules and documentation development progress prior to the start of test bed validation.

g. Assessing status of CSIT simulation/stimulation computer program development efforts, and CSIT test configuration status.

h. Determining ship class combat system life cycle and long range update plans.

2. CSEs should schedule a CPG approximately four months prior to the start of a planned CSIT to determine if there are major open issues which impact the CSIT. Based on the results of this CPG, the CSE should coordinate with the Warfare Systems Assessment Office (SEA 05D) to determine if any issue warrants SEA 05 attention before proceeding with the required Final CSIT Readiness Review.

3. CSEs shall coordinate with program managers for both Rapid Prototype and OT&E systems scheduled for installation in his ship class to ensure their timely participation in CPGs and to verify system development plans and status.

4. CPG Entry/Exit Criteria:

Since CPGs are forums for detailed technical discussions, no formal entry/exit criterion is required; however, detailed meeting minutes should be taken and distributed. Resulting action items should be reassessed at later CPGs or FLRRs.

FLAG LEVEL READINESS REVIEW (FLRR) MEETINGS

1. FLRRs shall be structured to provide the FLRR panel with an opportunity to evaluate and participate in key programmatic decisions. SEA 05 should ensure, to the maximum extent possible, that presentation material is purged of routine information in order to effectively utilize the time of FLRR.

2. CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 ship classes require a minimum of three FLRRs (ICRR, FCRR, and FDRR) for each combat system baseline delivered to a ship class. AEGIS CG/DDG, SSN/SSBN, MCM and MHC Classes participate only in the FDRR.

3. CSEs should carefully evaluate baseline configurations prior to an ICRR and when practical, present multiple baselines at each FLRR. For example, CV/CVN and LHD frequently test similar versions of the same baseline and a combined ICRR may suffice.

4. The program manager for each system's computer programs shall provide a status briefing at each scheduled FLRR unless specifically excused by SEA 05 as a result of the Prebrief.

5. When scheduling a FLRR preceding delivery for CSIT, SEA 05 shall ensure that system program managers provide material which identifies combat system capabilities improved as a direct result of implementing the upgraded baseline and addresses new or substantially changed interfaces to be targeted during CSIT.

INITIAL CSIT READINESS REVIEW (ICRR)

1. An ICRR shall scheduled by the ship class CSE for the CV/CVN, LHD, LHA, LSD, LPD 17, FFG 7 and DD 963 Classes not less than eight months in advance of a scheduled CSIT. For a complex CSIT that involves multiple interfaces, major system upgrades or new systems, an ICRR should be scheduled approximately eighteen months prior to testing. For a CSIT involving only life cycle or interface upgrades, an ICRR should be scheduled approximately eight months prior to testing.

2. The purposes of the ICRR are to:

a. Identify the system configurations comprising the ship class combat system baseline to be tested during CSIT.

b. Assess each system's computer program and documentation development status against SQI readiness criteria.

c. Ensure that CSIT simulation development, test plan development and the combat system configurations will support integration testing.

d. Identify CSIT risks and corrective actions required.

3. ICRR Entry Criteria:

a. CSIT Test Directors are prepared to present combat systems test plans and schedules, and test bed, system simulation and stimulation requirement for the ship class under test.

b. Ship class combat system program managers are prepared to present their baseline computer program development plans, planned upgrades/enhancements, documentation and interface requirements.

4. ICRR Exit Criteria:

a. System's and test site computer program configurations for the ship class are baselined and all unique combat system integration requirements are specified.

b. Each system's computer program performance specification documentation is under program manager configuration control.

c. Interface control documents such as Interface Design Specifications (IDS), Interface Requirement Specifications (IRS) and Interface Design Documents (IDD) are under SEA 05D Combat System Software Change Control Board (CSSCCB) configuration control.

d. Outstanding issues which may impact computer program development have a risk assessment and corrective action plan.

5. The ICRR determines if CSIT planning should continue as scheduled or be delayed and if open issues require additional action by the ICRR participants.

FINAL CSIT READINESS REVIEW (FCRR)

1. An FCRR shall be shall scheduled by the ship class CSE for the CV/CVN, LHD, LHA, LSD, LPD 17, FFG 7 and DD 963 Classes one month prior to CSIT.

2. CSIT personnel report on the readiness of the land-based test site to begin scheduled combat system integration testing and program managers report the development status of their system's computer programs.

3. The purposes of the FCRR are to:

a. Determine the test site computer program development status and ensure that the test site simulation programs are fully capable of supporting the CSIT.

b. Determine test documentation development status to ensure that the test procedures will be ready in time to support CSIT and verify cut-off dates for systems to deliver their initial and updated computer programs.

c. Ensure that the test bed equipment configuration will fully support the scheduled CSIT.

d. Determine each system's development status, CSIT readiness, and whether their computer programs meet the CSIT delivery criteria.

e. Assess risks associated with the CSIT and establish fallback positions and any required work-arounds.

4. FCRR Entry Criteria:

a. CSIT Test Director is prepared to present detailed test plans and schedules, system computer program delivery cut-off dates and open issues requiring resolution prior to the start of testing.

b. Ship class combat system program managers can identify computer program versions for CSIT, PAT/FQT completion dates, ECPs implemented, system documentation status, open PTRs and issues impacting CSIT.

5. FCRR Exit Criteria:

a. System computer programs have successfully completed Formal Qualification Testing (FQT) or equivalent testing.

b. System computer programs have demonstrated an endurance capability of 25 consecutive hours.

c. System computer programs have zero open high severity (priority 1 or 2) Program Trouble Reports (PTR).

6. The FCRR determines if the planned CSIT should continue as scheduled. The FCRR panel may authorize delivery of computer programs which do not meet SQI CSIT delivery criteria to support a program manager's risk reduction effort or a work-around solution for a development problem. The decision to deliver programs which do not meet SQI criteria shall be documented in the FCRR meeting minutes.

FLEET DELIVERY READINESS REVIEW (FDRR)

1. An FDRR shall be shall scheduled by the ship class CSE for the CV/CVN, LHD, LHA, LSD, LPD 17, FFG 7 and DD 963 Classes after completion of CSIT and by SEA 05 for AEGIS CG/DDG, SSN/SSBN, MCM and MHC Classes after completion of system level certification. Concurrent FDRR scheduling should be the goal, particularly when combat systems of ships within the same Battle Group are involved. Fleet user and Operational Test Force personnel are invited to participate.

2. Unless required to meet a earlier delivery date, the FDRR should be scheduled not less than two and one-half weeks after completion of CSIT or equivalent testing to allow time for test evaluation and trouble report/data analysis by both test personnel and system computer programmers.

3. CSIT or equivalent integration test personnel and designated system program managers report on the readiness of the combat system baseline for delivery based on test results and other relevant factors.

4. The purposes of the FDRR are to:

a. Evaluate CSIT or equivalent test results to determine the strengths and weaknesses of specific computer program suites comprising combat system baselines scheduled for delivery to the Fleet for operational use and Battle Force deployment.

b. Ensure that new and/or upgraded computer programs that have completed CSIT or equivalent testing demonstrate improved performance capabilities when compared to benchmarks established during previous baseline testing.

c. Determine the overall readiness of each combat system computer program baseline for certification and delivery to the Fleet.

d. Determine which system's computer programs are in compliance with the SQI criteria and can be certified.

e. Determine the course of action to be taken for computer programs which require delivery due to operational necessity but which can not be certified because of known deficiencies.

f. Establish a list of each system's computer program version identifiers comprising the baseline and evaluate the proposed Fleet delivery schedules.

5. FDRR Entry Criteria:

a. CSIT Test Director is prepared to disclose test results in sufficient detail for the FDRR panel to make their certification decision and provide a delivery recommendation based on combat system maturity and reliability.

b. Ship class combat system program managers can identify their computer program versions to the patch level, contribution to improved combat system capability, war fighting enhancements implemented, PTR closure plans, delivery schedules and unresolved issues impacting delivery to the Fleet.

6. FDRR Exit Criteria:

a. System interfaces and functional data exchange across the interfaces operate in compliance the with interface control documents (IDS, IRS or IDD).

b. Each system's computer program capabilities and operational performance demonstrate an improvement over previously delivered versions.

c. Each system's computer program has successfully passed a stress and endurance test. For programs not tested at the NSWC PHD DSD CSIT site, successful completion of a maximum capability stress and endurance test shall be identified to the Warfare Systems Assessment Office (SEA 05D).

d. Each system's computer program has zero open high severity (priority 1 or 2) Program Trouble Reports (PTR).

7. The FDRR determines which system computer programs are certified, which system computer programs may be delivered uncertified for specific restricted use, and if planned Fleet deliveries should continue as scheduled based on all known factors.

Glossary
Acronyms and Abbreviations

ARG	Amphibious Readiness Group
BFI	Battle Force Interoperability
BGIT	Battle Group Integration Testing
CCS LCSF	Command & Control System Life Cycle Support Facility
CPG	Coordination Planning Group Meeting
CSE	Ship Class Combat System Engineer
CSIT	Combat System Integration Test
CS/NPE	Combat System/Non-Propulsion Electronics
CSSCCB	Combat System Software Change Control Board
CVBG	Aircraft Carrier Battle Group
DEP	Distributed Engineering Plant
D-30	Deployment Minus 30-Months
ECP	Engineering Change Proposal
FCRR	Final CSIT Readiness Review
FDNF	Forward Deployed Naval Force
FDRR	Fleet Delivery Readiness Review
FLRR	Flag Level Readiness Review
FQT	Formal Qualification Testing
G&PP	Guidance and Policy Paper
ICRR	Initial CSIT Readiness Review
ICWG	Interface Control Working Group
IDD	Interface Design Document
IDS	Interface Design Specification
IRS	Interface Requirement Specification
MEF	Marine Expeditionary Force
MOA	Memorandum Of Agreement
COATS	CCS Module Off-Hull Assembly and Test Site
PAT	Program Acceptance Test
PTR	Program Trouble Report
PTRR	Platform Test Readiness Review
TIM	Technical Interface Meeting
SQI	Software Quality Improvement Program
SSP	Strategic Systems Programs
TCD	Target Completion Date
WAIF	Wide Area Integration Facility

APPENDIX E

Warfare Systems Guidance and Policy Paper (G&PP) No. 99-06

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
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IN REPLY REFER TO
9400
Ser 05/9063
26 May 1999

WARFARE SYSTEMS GUIDANCE AND POLICY PAPER NO. 99-06

From: Deputy Commander, Warfare Systems Directorate

Subj: COMBAT SYSTEM SOFTWARE CHANGE CONTROL BOARD (CSSCCB)

Ref: (a) Warfare Systems Guidance and Policy Paper No. 99-05, Software Quality Improvement (SQI) Program of 21 May 99
(b) Warfare Systems Guidance and Policy Paper No. 98-03, Battle Force Interoperability (BFI) Certification Process of 4 Aug 98
(c) Procedures Guide for NAVSEA Combat System Software Change Control Board of 25 May 99

1. Purpose. This paper provides policy and guidance for the operation of the NAVSEA Combat System Software Change Control Board (CSSCCB). The CSSCCB is charged with exercising configuration control on all new Interface Control Documents and/or Class 1 computer program Engineering Change Proposals (ECP) which affect data exchange across combat system interfaces in the AEGIS CG/DDG, CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes.

2. Applicability. This G&PP is applicable to the PEOs, NAVSEA, NAVAIR and SPAWAR program managers responsible for development of new or upgraded combat system computer programs and the interface control documents specifying data exchange between combat systems installed or planned for installation in surface ships.

3. Background. The NAVSEA CSSCCB has been in existence since the early 1980s and performed vital configuration control functions in the area of data exchange between combat system elements. The CSSCCB has also contributed significantly to the Software Quality Improvement (SQI) program defined in reference (a). With the emphasis now being placed on Battle Force Interoperability (BFI), as stated in reference (b), coupled with Fleet demands for stringent configuration control of baselines, the importance of the CSSCCB has increased dramatically. Additionally, the requirement to conduct Battle Group Integration Testing (BGIT) through utilization of the Distributed Engineering Plant (DEP)

demands that combat system test beds be kept current with respect to equipment, simulation/stimulation capabilities and documentation. This in turn requires stringent control of information being passed between systems to not only provide a sound basis for development and test but also to achieve maximum commonality between ship classes as cost and risk mitigation factors.

4. Scope. For the purposes of this G&PP, a Class 1 ECP is defined as any change to an approved interface document that specifies data exchange between systems within a combat system. Interface Control Documents are defined as either Interface Requirements Specifications (IRS), Interface Design Documents (IDD), or Interface Design Specifications (IDS). Detailed procedures relevant to CSSCCB composition and the ECP approval process are defined in reference (c).

5. Guidance And Policy.

a. The Combat System Software Change Control Board (CSSCCB) shall function as the overarching NAVSEA platform level combat system configuration control forum. All new Interface Control Documents shall be submitted to the CSSCCB for approval and, once approved, shall not be modified except by Class I ECPs. All ECPs that impact data exchange between combat system elements shall be deemed as Class I and submitted to and approved by the CSSCCB before implementation. ECPs impacting AEGIS ship classes shall not be be approved without first obtaining PMS 400B3 concurrence. ECPs impacting non-AEGIS ship classes shall not be approved without first obtaining applicable ship class CSE concurrence.

b. The CSSCCB shall operate as a programmatic board: all technical issues on each side of the interface shall be resolved before the ECP is submitted to the CSSCCB. The primary function of the CSSCCB in this regard is to coordinate interface change implementation schedules to avoid incompatibilities and ensure that simulators and test beds will support the interface changes rather than assess technical merits of the change(s).

c. The CSSCCB Chairman, NAVSEA 05D12, shall monitor system development plans and schedules presented at Software Quality Improvement (SQI) meetings required by reference (a) and ensure that interface agreements and engineering changes are coordinated between interfaced systems.

6. Responsibilities.

a. SEA 05 is responsible for management of the CSSCCB and establishing the procedures that govern operation of the board.

b. The CSSCCB Chairman is responsible for ensuring that new Interface Control Documents and/or ECPs that impact baselined Interface Control Documents are approved by both sides of the interface prior to CSSCCB approval.

c. Program managers responsible for development of Class 1 ECPs which impact interfaced combat systems in the AEGIS CG/DDG, CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes shall submit their approved ECPs to the CSSCCB.

d. Program managers shall ensure that ECPs submitted to the CSSCCB have completed their internal approval cycle, are fully funded, identify impacted ships and/or ship classes, assigned an implementation date and contain all the information specified in reference (c).

e. Program managers, or a representative authorized to make commitments for the program manager, are required to participate in CSSCCB meetings and are responsible for responding to board member queries on interoperability issues, risk factors, ship applicability, dates of implementation, overall test impact, and funding of proposed changes.

f. Combat System Engineers (CSE) for the CV/CVN, LHD, LHA, LSD, LPD 17, DD 963 and FFG 7 Classes and AEGIS CG/DDG Class Baseline Managers are required to participate in CSSCCB meetings and provide an ECP recommendation to the board.

g. The CSSCCB Chairman shall ensure the CSSCCB proceedings are scheduled, agendas provided, and results are recorded. The Chairman shall also maintain the current status of each ECP submitted to the board for action. The Chairman shall also ensure that impacts to simulation/stimulation systems and test beds are considered prior to approving any ECP.

7. Review Responsibility. SEA 05 is responsible for the currency of this paper. The CSSCCB G&PP shall be reviewed at least once per year and updated as required.

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Deputy Commander,
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PEO EXW (D/CAPT White, PMS444/CAPT(SEL) Brooks, PMS444B/Smothers, McCants, Leonberger, PMS430/French,PMS430C/LCDR Creevy, PMS471/Schor)
PEO USW (PMS411C/Worland, PMS411C11/Olsen)
APEX (Ammann)
C-Cubed (Hess)
Comptek (Wilson, Minnick, Merrill, Williams, Schuler, Elliot)
Comptek VB (Vandeveer)

EG&G (Sanders)
GRCI (Wasem)
JHU/APL (Krummenoehl)
Marconi (Bytheway, Landmann)
PRC (Chesser)
RCS (Robinette, Buette)
Techmatics (Brow)
SAIC (Bryan)
SIR (Farmer)

APPENDIX F

CINCLANTFLT/CINCPACFLT Instruction 4720.4

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CINCPACFLT/CINCLANTFLTINST 4720.4A

N632/N661
6 OCT 99

CINCPACFLT/CINCLANTFLT INSTRUCTION 4720.4A

Subj: BATTLE GROUP SYSTEMS INTEGRATION TESTING (BGSIT) PROCESS

Ref: (a) CINCPACFLT/CINCLANTFLTINST 4720.3 Series

1. Purpose. This instruction promulgates guidance and direction for the conduct of the CINCPACFLT/CINCLANTFLT-sponsored Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) and Combat Systems integration testing and validation process within deploying Carrier Battle Groups(BG), Amphibious Ready Groups (ARG), and Middle East Forces(MEF), to include embarked Naval air wings (CVW and ACE) and Marine Expeditionary Units (MEU). The process defined by this instruction complements the configuration control process formalized in reference (a). The intent of the Battle Group Systems Integration Testing (BGSIT) process is to provide an evaluation of C4ISR/Combat Systems interoperability and integration within the deploying BG/ARG/MEF/CVW/MEU/ACE to the FLTCINC, Numbered Fleet Commander, Fleet Marine Force Commander, and the BG/ARG/MEF Commanders. CINCPACFLT/CINCLANTFLT BGSIT is a CINCPACFLT/CINCLANTFLT-directed program designed to provide a comprehensive validation of “total force system” performance prior to overseas deployment. BGSIT is chartered by CINCPACFLT/CINCLANTFLT to liaison with the Type Commanders(TYCOMs), Systems Commands (SYSCOMs), and Program Executive Offices (PEOs) in reporting and tracking resolution of BG/ARG/MEF/CVW/MEU/ACE C4ISR/Combat System interoperability and integration issues.

2. Cancellation. CINCPACFLT/CINCLANTFLTINST 4720.4. This instruction should be reviewed in its entirety as significant revisions have been made from the previous instruction.

3. Definitions. In this instruction, BG refers to all ships within the Carrier Battle Group including attached submarines, the associated air

wings including helicopter detachments, and any attached Middle East Force units. ARG refers to all ships within the Amphibious Ready Group, embarked Marine Expeditionary Units, and embarked Air Combat Elements.

4. Scope. This instruction addresses the organizational participation, duties and responsibilities required for identifying BG and ARG C4ISR and Combat Systems areas of concern, determining appropriate levels and sources of technical expertise required for resolution, and programming of at-sea systems integration and interoperability testing and validation procedures.

5. Background. The CINCPACFLT/CINCLANTFLT BGSIT process considers the BG's and ARG's interfacing sensors and networks as a single C4ISR/combat system designed to function in an integrated and complementary manner. The BGSIT process focuses on providing Commanders with a higher level of confidence in system operations by identifying system limitations, coordinating a resolution Plan of Action and Milestones (POA&M), and assisting in determining potential work-around options for system limitations that cannot be resolved prior to deployment. The concept of integrated testing and validation at the BG/ARG level was developed in response to the Fleet's requirement for a stressed, operational demonstration of C4ISR/Combat systems functionality following new installations and upgrades. The Fleet further required the BGSIT process be conducted prior to the final phases of the Inter-Deployment Training Cycle (IDTC). The level and scope of testing and validation have been successfully demonstrated at the BG level since FY-95 and with ARG participation since FY-96. As defined below, the BGSIT process assists the deploying Commander, TYCOMs and SYSCOMs in the coordination and programming of existing support processes. This process also assists operators in the early assessment of individual platform functionality and conducts systems integrated testing/validation during underway operations.

6. Methodology. BGSIT is tailored (1) to the BG/ARG's composition and (2) to the hardware, firmware, software baseline established by the configuration control process guided by reference (a). BGSIT assesses C4ISR/combat systems integration and interoperability to include systems configuration, documentation, and operators' usage. It also encompasses specific actions that are progressive and supportive, including:

(1) the conduct of operational tests to identify and isolate hardware, firmware and software problems to the system level;

(2) the evaluation of system interfaces and peripherals;

(3) the conduct of operator familiarization when required;

(4) the assistance of TYCOMs, SYSCOMs and PEOs in coordinating of reported issues. Phased execution, as outlined below, provides a focused and incremental team-building approach to BG/ARG C4ISR/Combat systems operations during pre-deployment exercises.

a. Program Introduction (PI). PI is conducted in conjunction with the BG/ARG/MEF Planning Review Conference chaired by the CINCPACFLT/CINCLANTFLT in accordance with reference (a). At this conference, the CINCPACFLT/CINCLANTFLT BGSIT Program Director and the BGSIT Program Manager introduce the BGSIT process and the associated requirements to the deploying group staffs, TYCOM, SYSCOM, and PEO representatives. PI typically is conducted sixteen months prior to deployment.

b. Preliminary Assessment (PA). PA is coordinated by the BG/ARG Commander, in conjunction with the CINCPACFLT/CINCLANTFLT BGSIT organization, as a compilation of available services and information, and is designed to baseline individual platforms' systems prior to combined underway operations. These actions are preemptive and necessary in the basic stages of formulating operations to facilitate unit interoperability and the formal testing associated with BGSIT. PA typically begins eight to ten months prior to deployment.

c. Problem Definition Survey (PDS). PDSs are conducted on all combatant ships within the BG and ARG to identify currentC4ISR/Combat systems configuration, including software, firmware and hardware versions, and to determine experienced or perceivedC4ISR/Combat system interoperability issues. For CV/CVN and LHA/LHD ships, underway testing and evaluation of inter-connectingC4ISR/Combat systems are conducted within programmed underway exercises on a not-to-interfere basis. Similar testing and evaluation are conducted on CG, DD/DDG, FFG, and SSN ships within the BG/ARG if scheduling and availability permit. If scheduling and availability do not permit, CG, DD/DDG, FFG, and SSN ships will have PDS testing and evaluation conducted pier-side. MEU and ACE participation should coincide with PDSs for the ARG. Cumulative PA and PDS results provide early and proper focus on perceived and documented system issues, and assist in customizing BG/ARG-specific baseline testing procedures. PDS requires participation by all deploying units. Geographic and operational constraints will be considered when tailoring PDS. PDS typically begins six to eight months prior to deployment.

d. Readiness Review (RR). RR is a meeting conducted to bring together associated BG/ARG staffs, ship representatives, TYCOM, SYSCOM, and PEO representatives to finalize test and validation plans and Schedule of Events (SOE) requirements prior to conducting operational systems integration testing and validation at-sea. The CINCPACFLT/CINCLANTFLT BGSIT Program Director chairs the meeting. CINCPACFLT/CINCLANTFLT promulgates the agenda. RR is typically conducted six months prior to deployment. In CINCLANTFLT, this meeting is conducted concurrently with the N6 Pre-TCD Meeting.

e. Final Integration Testing (FIT). FIT executes a series of tests, programmed in the BG/ARG SOE, and non-interfering evaluations during BG/ARG underway operations. The conduct of these events requires BG/ARG support including, but not limited to air services, ship/submarine/aircraft positioning, cycling of emitters/sensors, management of systems configuration, communications net assignments, and

manipulation of tactical datalink parameters as coordinated via the SOE. Based upon PA and PDS results, the FIT team will embark all units and will be structured in numbers and expertise to identify a comprehensive profile of current system status. BG/ARG participants shall abide by the FIT SOE. BG/ARG participants should take advantage of the technical expertise the FIT team brings to the BG/ARG.

f. Post-FIT Issue Tracking and Resolution. The CINCPACFLT/CINCLANTFLT BGSIT Program Manager will expeditiously promulgate the results of FIT via a hot-washup message, forward pertinent extracted magnetic data, and coordinate with cognizant activities for actions necessary to assist in the resolution of identified shortfalls prior to deployment. To facilitate tracking of resolution progress, the CINCPACFLT/CINCLANTFLT BGSIT Program Manager, in coordination with the deploying Commanders, will identify a comprehensive resolution reporting POA&M. Responses from SYSCOMs/TYCOMs/PEOs in accordance with this POA&M and periodic status updates from the CINCPACFLT/CINCLANTFLT BGSIT Program Manager and BG/ARG units are required to ensure deploying Commanders are kept informed and involved in issue resolution.

7. Procedures. The following paragraphs outline the planning process for scheduling, coordinating and conducting the BGSIT process.

a. Scheduling. Programming of the BGSIT process within operational, maintenance and training requirements demands early and detailed coordination between primary scheduling agencies. BG/ARG Commanders, TYCOMs and Fleet schedulers are expected to dedicate the appropriate time and assets required throughout this process to ensure a comprehensive validation of integrated systems performance prior to advanced training exercises. FIT shall be programmed during initial IDTC design, follow the Target Configuration Date (TCD) as defined in reference (a), and include all BG/ARG units.

(1) BG Scheduling Considerations. If programmed during COMPTUEX, the specific days of FIT shall be coordinated with the training CARGRU and the deploying BG staff. Programming of FIT a minimum of 70 – 80 days prior to advanced training exercises will provide the optimum opportunity for issue resolution prior to deployment. A nominal underway period of seven to nine days shall be programmed for FIT periods as coordinated with the CINCPACFLT/CINCLANTFLT BGSIT Program Manager. All assigned units shall be scheduled to participate during FIT. Deploying staff representatives shall be embarked during FIT.

(2) ARG Scheduling Considerations. FIT dates shall be coordinated with the ARG staff. Programming of FIT a minimum of 60 days prior to advanced training exercises will provide the optimum opportunity for issue resolution prior to deployment. As a standard objective, a five to seven day ARG testing period should occur simultaneously with BG testing as discussed in paragraph 7.a.(1) above. Such coordination permits the optimum opportunity for evaluation of BG/ARG C4ISR/combat system integration. If a concurrent

BG and ARG FIT cannot be conducted, due to exercise scheduling constraints, a three day period of connectivity testing between the LHA/LHD and CV/CVN during the BGFIT period may be considered. A subsequent five day testing period would then be required for all ARG units.

(3) MEF Scheduling Considerations. FIT dates shall be coordinated with the MEF staff. Programming of FIT shall occur in conjunction with the BG FIT if the MEF IDTC permits. If the MEF cannot participate during the BG FIT due to IDTC constraints, CINCPACFLT/CINCLANTFLT shall determine the requirement to conduct at-sea interoperability and integration testing on a case-by-case basis. The CINCPACFLT/CINCLANTFLT BGSIT Program Manager will coordinate the required FIT period based on unit availability, MEF operational schedules and the MEF C4ISR/combat systems configuration. Notional Scheduling Overview. The following notional timeline should be considered when planning for a BG/ARG's turnaround cycle and should be modified if necessary to accommodate unique operational commitments.

BGSIT NOTIONAL TIMELINE (D = deployment date)

D minus 16months
CINCPACFLT/CINCLANTFLT-hosted deploying BG/ARG Planning Review Conference per reference (a). CINCPACFLT/CINCLANTFLT BGSIT conduct initial BGSIT Program Introduction to include program briefings, liaison and schedule planning with associated BG/ARG staffs.

D minus 10months to D minus 6 months
BG/ARG units conduct Preliminary Assessment (PA) with assistance of CINCPACFLT/CINCLANTFLT BGSIT.

D minus 8 months to D minus 6months
BG/ARG units and CINCPACFLT/CINCLANTFLT BGSIT conduct Problem Definition Surveys(PDS).

D minus 6 months Target Configuration Date per reference(a).
CINCPACFLT/CINCLANTFLT conduct Readiness Review (RR) with participation from CINCPACFLT/CINCLANTFLT BGSIT, TYCOMs, SYSCOMs, PEOs, and BG/ARG staffs. Any remaining issues to support execution of the at-sea FIT must be completed at the RR. TYCOMs, SYSCOMs and PEOs must provide Subject Matter Expert (SME) nominees and Team Leader nominees by name to CINCPACFLT/CINCLANTFLT BGSIT no later than the RR.

D minus 170 days to D minus 150days
CINCPACFLT/CINCLANTFLT BGSIT and BG/ARG units conduct BG and ARG Final Integration Testing (FIT) at-sea. Conduct the MEF FIT in conjunction with BG/ARG FIT if schedule permits.

FIT plus 10 days
CINCPACFLT/CINCLANTFLT BGSIT issue comprehensive BGSIT Hot Washup report, which details all identified C4ISR and Combat Systems integration and interoperability issues. Hot Washup report is used (1) to report FIT

status to CINCPACFLT/CINCLANTFLT and BG/ARG Commander, and (2) to identify issues for resolution by TYCOMs, SYSCOMs and PEOs.

D minus 130 days to D-day
CINCPACFLT/CINCLANTFLT BGSIT actively track TYCOM, SYSCOM and PEO resolution of issues identified in the hot washup report. TYCOMs, SYSCOMs and PEOs conduct necessary actions to resolve issues identified in FIT hot washup report.

D plus 30 days
BG/ARG staffs provide an assessment report via message to CINCPACFLT/CINCLANTFLT N6 on the effectiveness of the BGSIT process in resolving C4ISR/Combat Systems integration and interoperability issues.

b. Coordination. Staffs, ships, air wings, and MEUs participating in the BGSIT process shall designate liaison personnel to coordinate scheduling and test plan issues with the CINCPACFLT/CINCLANTFLT BGSIT organization. The involvement of all BG/ARG units and staffs in the PA, PDS, RR, and FIT events and continuity of FIT team membership are essential. Early deconfliction with maintenance availabilities and IDTC requirements will maximize unit participation. Proper coordination is key to achieving an accurate picture of interoperability within the BG/ARG.

8. Responsibilities

a. CINCPACFLT/CINCLANTFLT BGSIT Program Director:

(1) Responsible for program oversight of the BGSIT process and the CINCPACFLT/CINCLANTFLT BGSIT Team. In the Pacific Fleet, CINCPACFLT N63 assigns the Program Director and directs CINCPACFLT BGSIT program policy. In the Atlantic Fleet, CINCLANTFLT N66 assigns the Program Director and directs CINCLANTFLT BGSIT program policy.

(2) Reports to the CINCPACFLT/CINCLANTFLT N6 on all BGSIT matters.

(3) Serves as official liaison between the CINCPACFLT/CINCLANTFLT BGSIT Team and the CINCPACFLT/CINCLANTFLT Staff, OPNAV Staff and all TYCOM, SYSCOM, and PEO Staffs formatters concerning the BGSIT Program.

(4) Is responsible for oversight of BGSIT Program fiscal requirements and their input into the Planning, Programming, and Budgeting System (PPBS).

(5) Chairs the BGSIT Readiness Review conducted as stated above.

(6) Maintains approval authority, in accordance with CINCPACFLT/CINCLANTFLT N6 direction, for the release of all CINCPACFLT/CINCLANTFLT BGSIT Naval messages.

b. CINCPACFLT/CINCLANTFLT BGSIT Program Manager (CINCPACFLT Code N63B; CINCLANTFLT Code N661A).

(1) Serves full-time as direct CINCPACFLT/CINCLANTFLT N6 agent in the conduct of all administrative functions, briefings, operational planning/execution, and reporting requirements in support of the BGSIT program as approved by the CINCPACFLT/CINCLANTFLT BGSIT Program Director.

(2) Coordinates with Fleet schedulers for the development and promulgation of timelines to support the conduct of BGSIT. Maintain a continuous and accurate planning forecast for BGs/ARGs/MEFs programmed to deploy within a nominal 20 month period as established in reference (a).

(3) Initiates early liaison with BG/ARG Commander staffs and unit Operations Officers and Combat Systems Maintenance Officers for BGSIT planning requirements.

(4) Promulgates an initiation message delineating coordinated timelines, BGSIT requirements and responsibilities for each BG/ARG staff and unit.

(5) Coordinates with TYCOM, SYSCOM and PEO liaison personnel for identification and designation of required technical team support and design/update of systems testing procedures.

(6) Serves as lead agent and primary BG/ARG Commander staff liaison during the conduct of each PA, PDS, RR, and FIT event.

(7) Coordinates with the training CARGRU, ARG ISIC, BG/ARG Commander staff, MEU staff, and ships as appropriate to deconflict FIT events and programmed training requirements via the SOE.

(8) Promulgates a hot washup message report identifyingC4ISR and Combat System integration issues, assigning actions to TYCOMs, SYSCOMs and PEOs, and providing BGSIT team liaison following the completion of each underway FIT period.

(9) In coordination with deploying Commanders, defines message reporting POA&M to establish criteria for recurring updates in the issue resolution process.

(10) Coordinates with designated TYCOM, SYSCOM and PEO liaison personnel for resolution of identified system issues.

(11) Promulgates consolidated issue status update message reports in conjunction with TYCOM, SYSCOM and PEO and deploying units’ update reports.

(12) Promulgates a pre-deployment status message report to collate completed and pending actions.

(13) Maintains a common CINCPACFLT/CINCLANTFLT BGSIT test plan and updates it to reflect inclusion of newly installed or upgraded C4ISR/Combat systems.

(14) Maintains a CINCPACFLT/CINCLANTFLT database of BGSIT issues and corrective actions. Each BGSIT Program Manager is responsible for maintaining an issues data base for their respective Fleet process.

c. TYCOMs

(1) Identify and designate liaison personnel for direct coordination with the CINCPACFLT/CINCLANTFLT BGSIT Program Manager in the conduct of all BGSIT PA, PDS, RR, FIT, and Post-FIT requirements.

(2) Identify and designate qualified personnel to support PDS and FIT requirements as requested.

(3) Coordinate with CINCPACFLT/CINCLANTFLT BGSIT Program Director, CINCPACFLT/CINCLANTFLT BGSIT Program Manager, individual BG/ARG Commanders, and Fleet schedulers for programming of BGSIT requirements during the IDTC.

(4) Assist CINCPACFLT/CINCLANTFLT BGSIT Program Manager in the design and update of test plans, as required.

(5) Pro-actively coordinate with SYSCOMs, PEOs, CINCPACFLT/CINCLANTFLT BGSIT Program Manager, and field activities as appropriate to resolve identified system issues prior to advanced BG/ARG training events.

(6) In accordance with BGSIT and BG/ARG staff promulgated reporting POA&M, provide timely and comprehensive message reports outlining actions taken and programmed to correct issues identified during FIT.

d. SYSCOMs/PEO

(1) Identify and designate central liaison personnel to assist CINCPACFLT/CINCLANTFLT BGSIT Program Managers in coordinating the specialized technical support required during BGSIT preparation, execution and final reporting.

(2) As required, assist CINCPACFLT/CINCLANTFLT BGSIT Program Manager in the design and update of test plans.

(3) Pro-actively coordinate with TYCOMs, CINCPACFLT/CINCLANTFLT BGSIT Program Manager and field activities as appropriate to resolve identified system issues prior to advanced BG/ARG training events. Coordinate and conduct analysis on magnetic tape data extraction obtained during FIT.

(4) Coordinate and conduct analysis on magnetic tape data extraction obtained during FIT.

(5) In accordance with BGSIT and BG/ARG staff promulgated reporting POA&M, provide timely and comprehensive message reports

outlining results of data analysis, actions taken and actions programmed to correct issues identified during FIT. Coordinated reporting between SYSCOMs/PEOs may be required.

e. BG/ARG Commanders

(1) Provide appropriate focus, priority and support for the conduct of the BGSIT process within the BG/ARG.

(2) Identify and designate staff liaison personnel for direct coordination with CINCPACFLT/CINCLANTFLT BGSIT Program Manager in conduct of all BGSIT requirements.

(3) Identify and designate individual unit liaison personnel to serve as focal point for all BGSIT operational and administrative requirements.

(4) Coordinate early scheduling and successful completion of Navy Center for Tactical Systems Interoperability (NCTSI)"Long Look" Link system verification test with all units required to conduct such a test prior to FIT.

(5) Assist the CINCPACFLT/CINCLANTFLT BGSIT Program Manager in determining PDS dates for all units.

(6) Ensure receipt of Systems TADIL Interoperability Report (STIR) from NCTSI prior to FIT.

(7) Coordinate completion of ID doctrine and OPTASK LINK and OPTASK COMMS review with all units prior to FIT.

(8) Coordinate BG/ARG units to conduct successful pier-side or underway link exercise event prior to FIT as feasible.

(9) Ensure BG/ARG SOE and system configuration support underway FIT requirements as defined in the promulgated test plan.

(10) Assist in designing issue status reporting POA&M, and coordinate with assigned BG/ARG units to provide message updates on issue correction status.

(11) Following the first month of deployment, provide candid assessment message to CINCPACFLT/CINCLANTFLT N6 discussing experienced value of the BGSIT program and areas recommended for improvement or growth.

9. Compliance with this instruction, in conjunction with the processes set forth in reference (a), will enhance C4ISR/Combatsystems readiness and performance of deploying Carrier Battle Groups, Amphibious Ready Groups and Middle East Force groups.

J. M. LUECKE A. G. HARMS, JR.

APPENDIX G

Standard BFAO Brief

This is the latest approved brief as used at the SPAWAR-sponsored N6 seminars in San Diego. The PowerPoint document is provided on the following pages.

Battle Force Action Officer (BFAO) / D-30

Presented To

Fleet N6 C4ISR Familiarization Seminar
23 May 2000 (DRAFT)

LCDR Bobby Mullins, USN
NAVSEA PHD

NAVSEA
PORT HUENEME
Surface Warfare Center Division

Outline

- Interoperability
- D-30 Process
- Action Plan
  - Distributed Engineering Plant (DEP)
  - Battle Force Action Officers (BFAOs)
  - Capabilities & Limitations Document
  - Installation process
  - Training
- Summary

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Interoperability - Defined

Ability of Systems, Units, or Forces to Provide Services to and Accept Services From Other Systems, Units, or Forces and to Use the Services So Exchanged to Enable Them to Operate Effectively Together and Achieve the Assigned Missions (JCS Pub 1)

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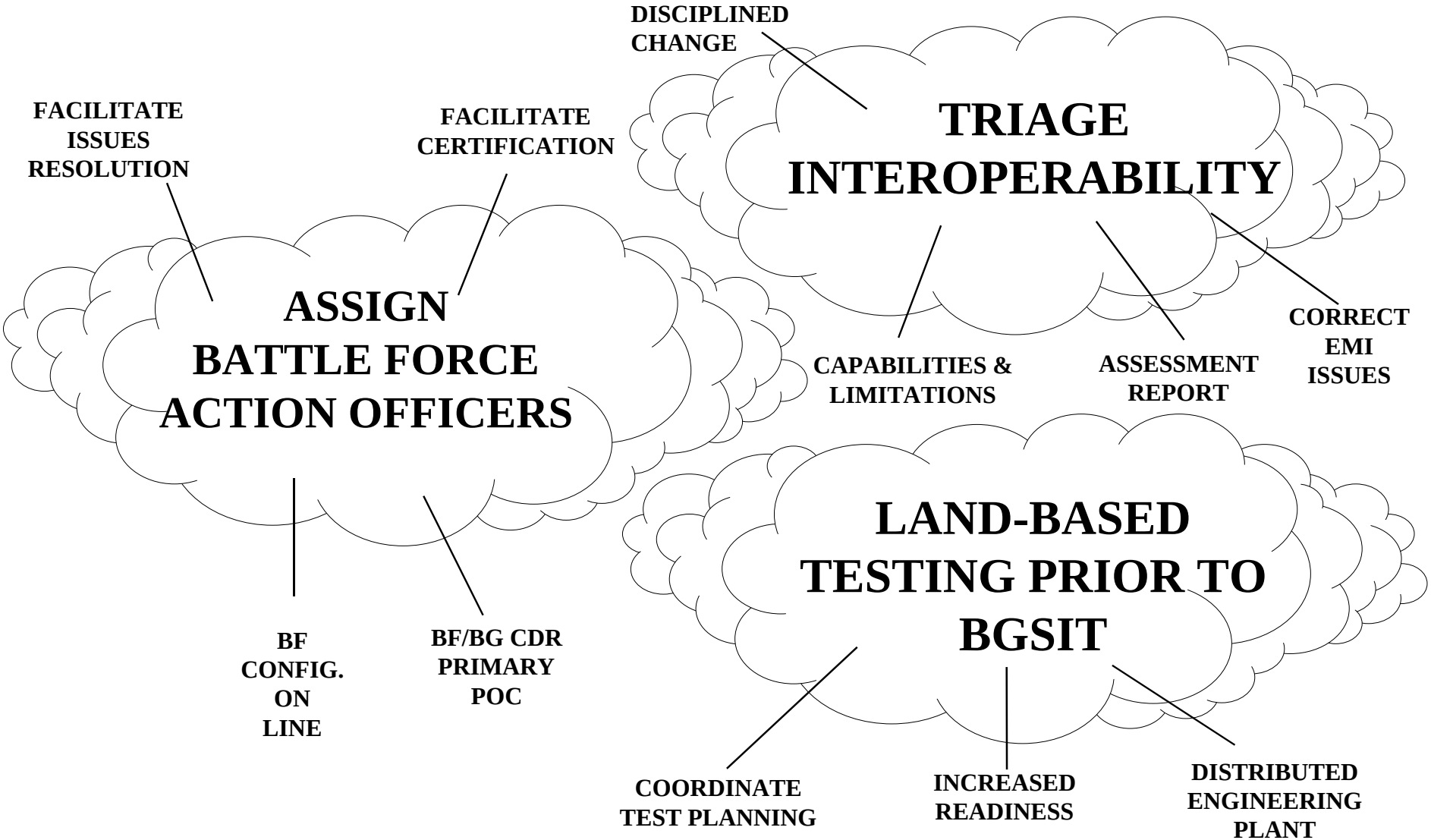
What Went Wrong?

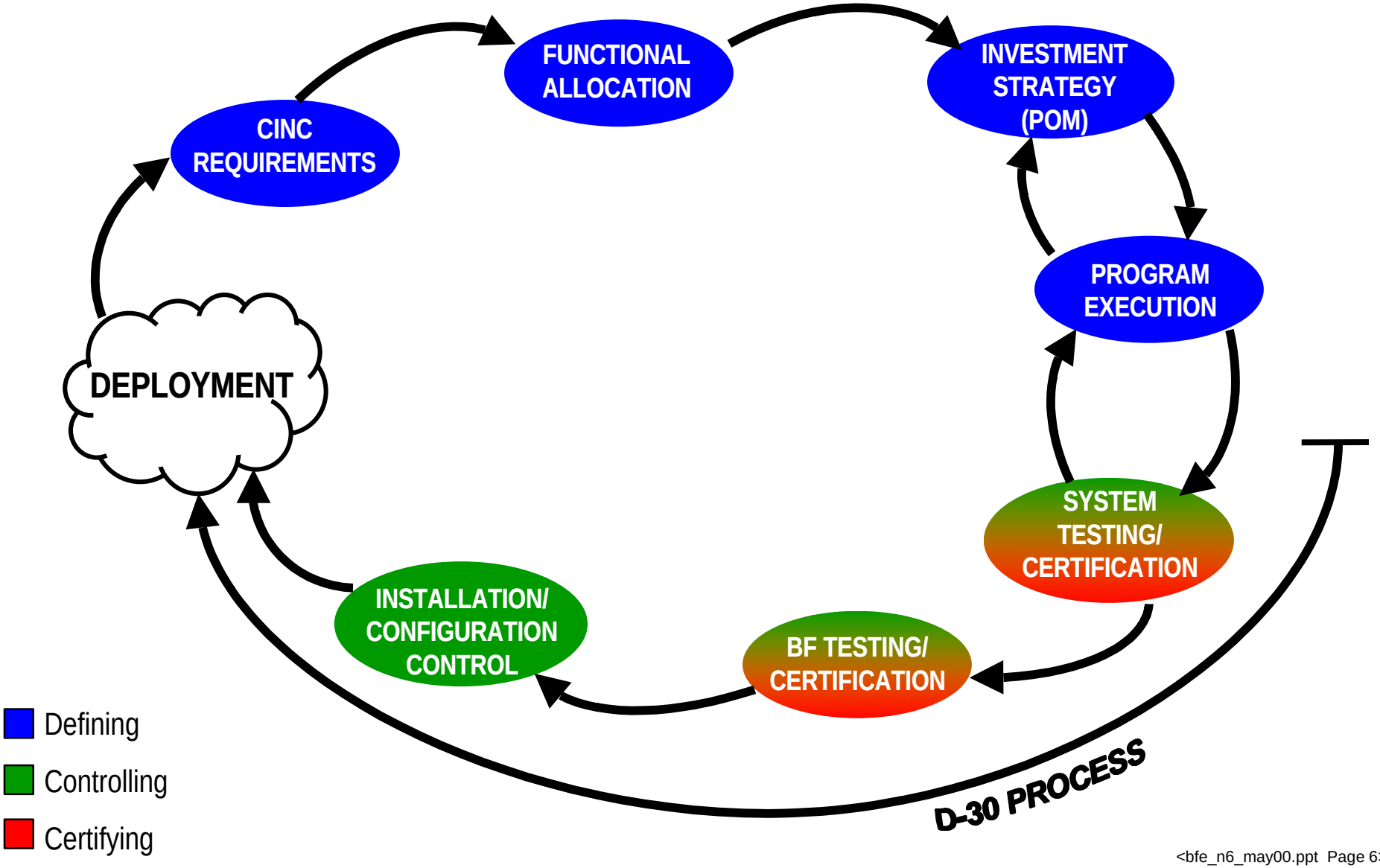
- NAVY Focused on Getting Capability Fielded Quickly
  - Schedule Driven - Ignore Engineering “Red Flags”
  - Budget Marks and Program Instability
- PMs Delivered Systems Not Fully Ready
  - Shortcuts in Development and Systems Engineering
  - Insufficient Testing Ashore
  - Inadequate Training and Logistics
  - PM’s not Required to Ensure Interoperability (Stovepipes)
- Disciplined Processes Not Followed
  - Build a Lot, Test Very Little, Ignore Results to Meet Schedule (Vice Build a Little, Test a Little, Learn a Lot)
  - Configuration Changes Just Prior to Deployment (Bust TCD, Bust TSTA, Bust COMPTUEX)

INTEROPERABILITY AND PERFORMANCE FAILURES

Near-Term Actions



BF Capabilities Evolution



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BFI Objectives

PROCESS	VALUE ADDED
E-CCB	Positive Control of System Configuration; Elimination of "Churning"
DEP	Problem Discovery & Solution Set Prior to Start of U/W Training
C&L	Documentation of What Works & Work-Arounds for What Doesn't
BL	Timely ID of Baseline / System Conflicts

SINGLE INTEGRATED SCHEDULE & ISSUE RESOLUTION PROCESS

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D-30 Process

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Six-Part Action Plan

- ✓ Conduct Thorough Land-Based Interoperability Tests and Assessments
- ✓ Support Battle Force Interoperability Test, Training, and Readiness Exercises
- ● Conduct Interoperability Certification to Validate Configuration and Interoperability Performance
- ✓ Develop Interoperability Capabilities & Limitations Document to Support Training & BF Work-Ups
- ✓ Provide Continuous Support of Battle Force… Early and Through Deployment
- ✓ Establish & Maintain a Repository for Interoperability and Configuration Data using Classified and Unclassified Networks

BATTLE GROUP FOCUS, EARLY ISSUE IDENTIFICATION & RESOLUTION, DOCUMENTATION AND TRAINING

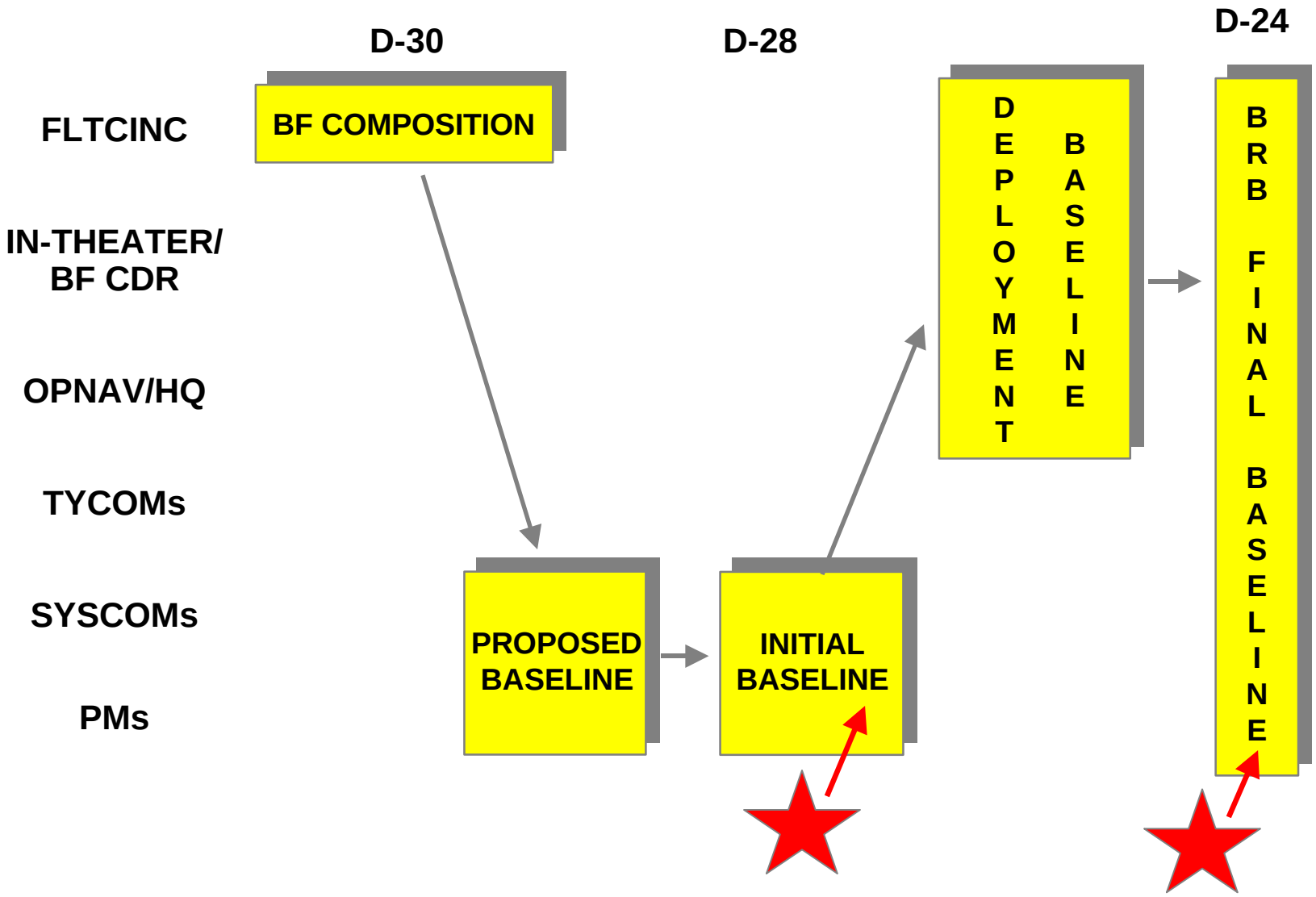
D-30 Timeline

D-30 BF Certification Process
NAVSEA Key Objectives

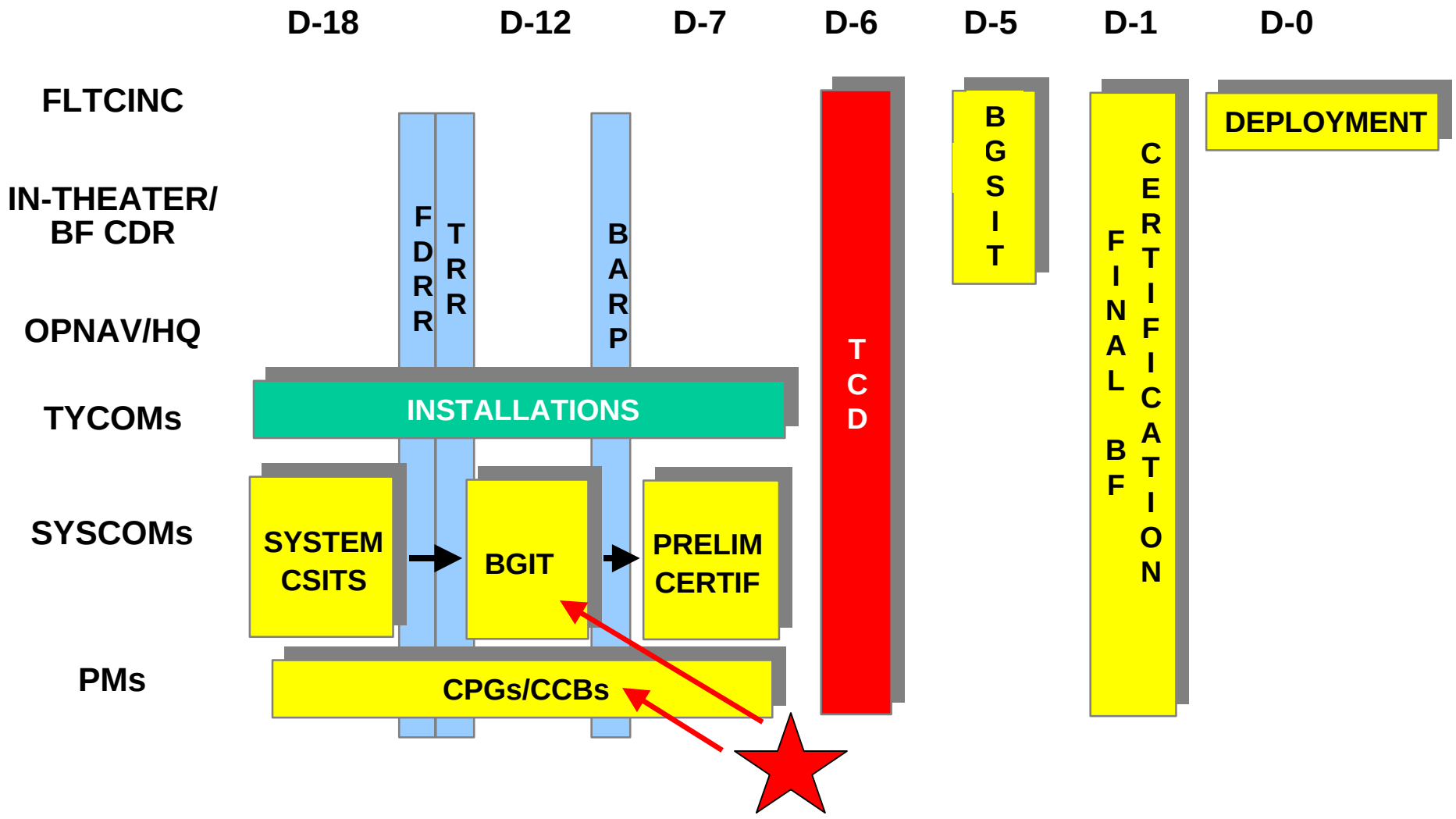
- No System or Program (Interoperable Type, As Applicable) Will Be Employed on a Ship Without Having Been Tested in the Distributed Engineering Plant (DEP)
- No Delivery or Testing of a Program Will Be Allowed During COMPTUEX/JTFEX.
- No Program Will Be Deployed With a BG That Is Not in the BG Caps & Lims (If Applicable to Caps & Lims).

ONLY CINCs HAVE AUTHORITY TO GRANT WAIVERS

D-30 BF Certification Process



D-30 BF Certification Process (cont)



Initial Baseline (IBR)
(Ref: CLF/CPF Inst 4720.3A)

Purpose

Formally review the **Proposed Baseline Configuration** and establish the **Initial Baseline Configuration** for a given Battle Force.

Process

IBR reviews the **Proposed Baseline Configuration** at D-28. As a result of the review, NAVSEA 53H establishes the **Initial Baseline Configuration**.

The **Initial Baseline Configuration** is transmitted through a message to FLTCINC, information to CNO, theater commanders, TYCOMS, and NFCs which lists all installations that will be accomplished prior to deployment.

Membership

- FLTCINC
- NAVSEA 53
- SPAWAR 05
- NAVAIR 4.0
- MARCORPSYSCOM
- SYSCOMs
- PEOs
- SPMs
- SUPPORT (AS REQUIRED)

D-25 Pre-Deployment Planning Conference (Ref: CLF/CPF Inst 4720.3A)

Purpose

Present the **Initial Deployment Baseline Configuration (DRAFT)** for a given Battle Force.

Process

D-25 Pre-Deployment Planning Conference presents the **Initial Deployment Baseline Configuration (DRAFT)** to TYCOMs/COMMARFOR, respective NFC, and respective COMPHIBGRU, and BG Commander with FLTCINC participation. As a result of the review, FLTCINC forwards the Fleet supported **Deployment Baseline Configuration Issues** to the SYSCOMs, PEOs, TYCOMs and OPNAV for action.

Membership

- FLTCINC
- NAVSEA 53
- SPAWAR 05
- BG Commander
- Numbered Fleet
- NAVAIR 4.0
- MARCORPSYSCOM
- SYSCOMs
- PEOs
- SPMs
- SUPPORT (AS REQUIRED)

Baseline Review Board (BRB)
(Ref: CLF/CPF Inst 4720.3A)

Purpose

Formally review and decide the **Final Baseline** for a given Battle Force.

Process

The configuration baseline of a given Battle Force evolves from **Preliminary** to **Initial** to **Deployment** per D-30 Process.

BRB establishes the **Final Baseline** at D-24. Subsequent changes are controlled by the BF **CCB.**

Membership

- FLTCINC (Chair)
- NAVSEA 53 (Deputy Chair)
- SPAWAR 05
- NAVAIR 4.0
- Numbered FLEET
- OPNAV N6/N8
- MARCORPSYSCOM
- TYCOMs
- SUPPORT (AS REQUIRED)

Battle Force Configuration Planning Group (BF CPG) (Ref: CLF/CPF Inst 4720.3A)

Purpose

Is responsible for reviewing all proposed installations and fighting unit schedules, planned baseline configurations, training requirements, computer program and documentation development status, proposed deliveries, integration test plans and test bed development, simulation/stimulation development, and issue/risk assessments.

Process

BF CPG meets quarterly between D-21 - D-12 to determine issues and corrective actions prior to certification testing.

Membership

- NAVSEA 53
- SPAWAR 04
- NAVAIR 4.0
- Numbered FLEET
- MARCORPSYSCOM
- TYCOMs
- SUPPORT (AS REQUIRED)

BF Change Control Board (CCB)
(Ref: CLF/CPF Inst 4720.3A)

➡ Purpose

Formally recommend changes to the **Final Baseline** for a given Battle Force.

FLTCINC is the final decision authority !

➡ Process

Various sponsors submit Electronic Risk Forms for CCB consideration following the Baseline Review Board (BRB) at D-24. The Chairman of the CCB forwards the board's recommendation to the respective FLTCINC, for decision. The FLTCINC decision is used to change the Final Baseline.

➡ Membership

- NAVSEA 53 (Chair)
- SPAWAR 04 (Deputy Chair)
- NAVAIR 4.0
- Numbered FLEET
- MARCORPSYSCOM
- TYCOMs
- SUPPORT (AS REQUIRED)

Software Certification Plan

CV/N CSIT (DATES:_____)
SYSTEMS: _____
_____
_____
_____

LHA/D CSIT (DATES:_____)
SYSTEMS: _____
_____
_____
_____

LS/PD CSIT (DATES:_____)
SYSTEMS: _____
_____
_____
_____

AEGIS "CPCP" (DATES: _____)
SYSTEMS: _____
_____
_____
_____

SSN (DATES: _____)
SYSTEMS: _____
_____
_____
_____
TBD

FDRR DATE: _____

FDRR DATE: _____

FDRR DATE: _____

FDRR DATE: _____

FDRR DATE: _____

TRR DATE: _____

START: _____ FINISH: _____

BGIT "DEP"

FLEET PARTICIPATION

BARP DATE: _____

TCD: BG: _____
ARG: _____
MEFS: _____

CSIT	***Combat Systems Integration Test***
FDRR	***Fleet Delivery Readiness Review***
CPCP (Aegis)	***Computer Program Certification Panel***
TRR	***Test Readiness Review***
BGIT	***Battle Group Interoperability Test***
BARP	***BGIT Assessment Review Panel***

BGIT Entry Criteria
Combat and C4I Systems

"System & Platform Testing Completed with Required Maturity Demonstrated"

- **Criteria**
  - ✓ Platform Certification Testing Completed
  - ✓ Successful Completion of 25 Hour Endurance
  - ✓ Zero High S/W Trouble Reports
- **If Highs Exist:**
  - ✓ Risks and Limitations Identified
  - ✓ No Safety Related Issues
  - ✓ Demonstrated increase in maturity over preceding Baseline with Flag approval of any outstanding criteria breaches.

FOCUS ON SAFETY & EFFECTIVENESS

D-30 Added Value Summary

- **4720.3A addresses both C4ISR and Combat Systems**
- **Joint SYSCOM Baseline**
  - Eliminate SYSCOM Walls: C4ISR/Combat System
  - NAVAIR, NAVSEA, SPAWAR, MARCOR
- **BF Certification Process**
  - System ⇒ Platform ⇒ Battle Force ⇒ Theater
  - Battle Force Ashore (Pre-BGSIT)
  - Independent Certification
- **Disciplined Configuration Control**
  - Initial Baseline Review (IBR)
  - Baseline Review Board (BRB)
  - Battle Force Configuration Planning Group (BF CPG)
  - Formal (electronic) Change Control Board (eCCB)
- **Interoperability Assessment**
  - Functional End-to-End Review
    - Early Problem ID (e.g., PLRS/EPLRS)
  - Caps/Lims
  - EMI/BGSIT Mapping/Resolution

D-30 Added Value Summary (cont)

Bottom Line:

- A Coordinated Process for Mapping New Systems/functionality To Each Battle Force
- A Coherent Certification Process
- A Necessity for a Network Centric Navy

Action Plan

- **Distributed Engineering Plant (DEP)**
- **Battle Force Action Officers (BFAOs)**
- **Capabilities & Limitations Document**
- **Installation Process**
- **Training**

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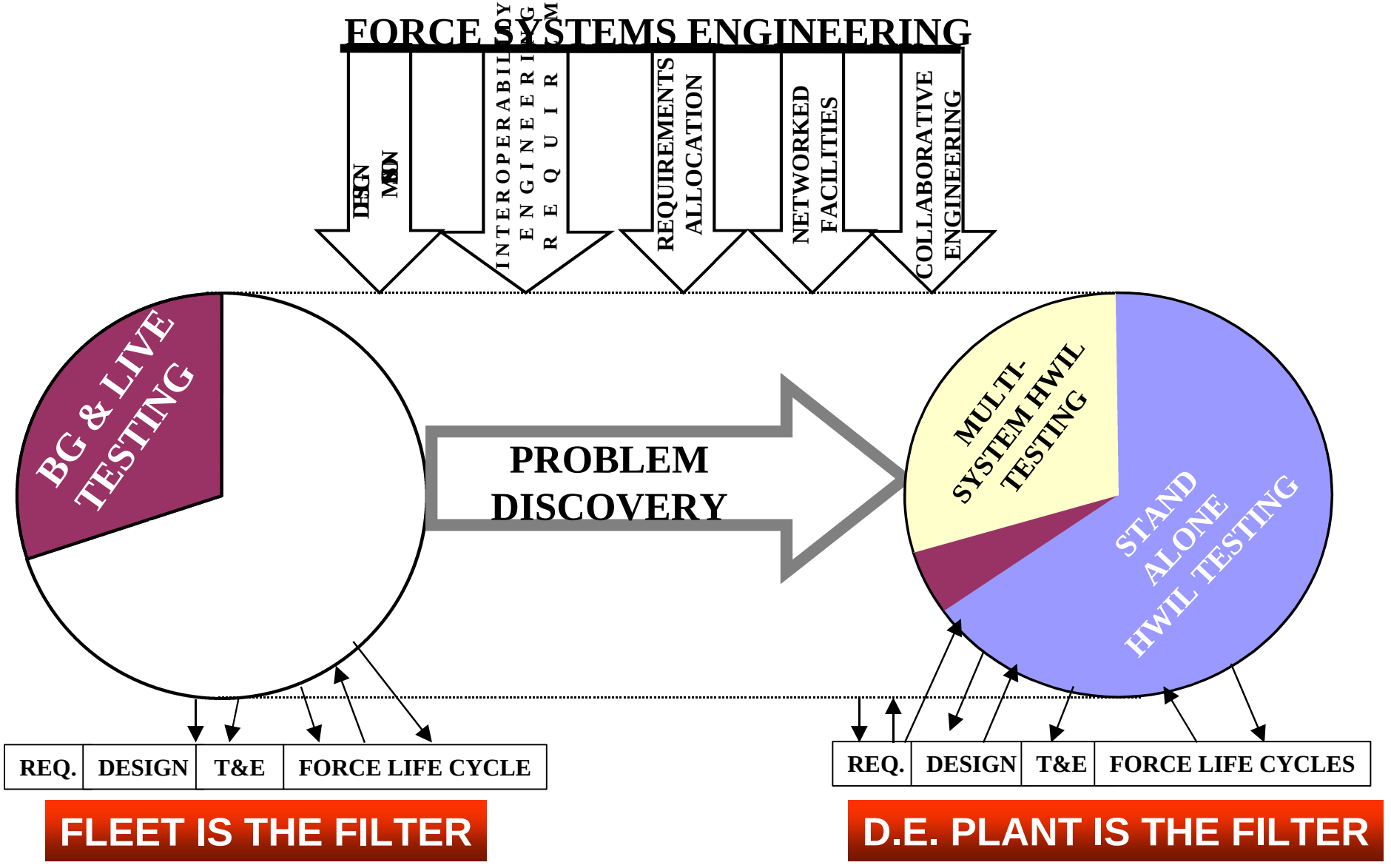
Why Distributed Engineering Plant ?

- Enable Paradigm Shift Necessary to Move Into Network Centric Environment.
- Enable Earlier Determination and Correction of Interoperability Problems in the Development Cycle.
- Provides Framework for Development and Implementation of “Good Engineering”, i.e. Disciplined SE Process at BG/BF Level.
- Decrease Burden on Operational Units.

PROTOTYPE FOR NETWORK CENTRIC WARFARE

Shift Problem Discovery Ashore



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DEP LINCOLN BG Configuration

F-14D
PT Magu

DDG-60 USS HAMILTON
ATRC

Simulation Control Center
NSWCDD

E-2C G2
SSCSD - PAX River

CG-52 USS BUNKER HILL
NSWCDD - ACC

Battle Group LINK Monitor
NCTSI

DEP

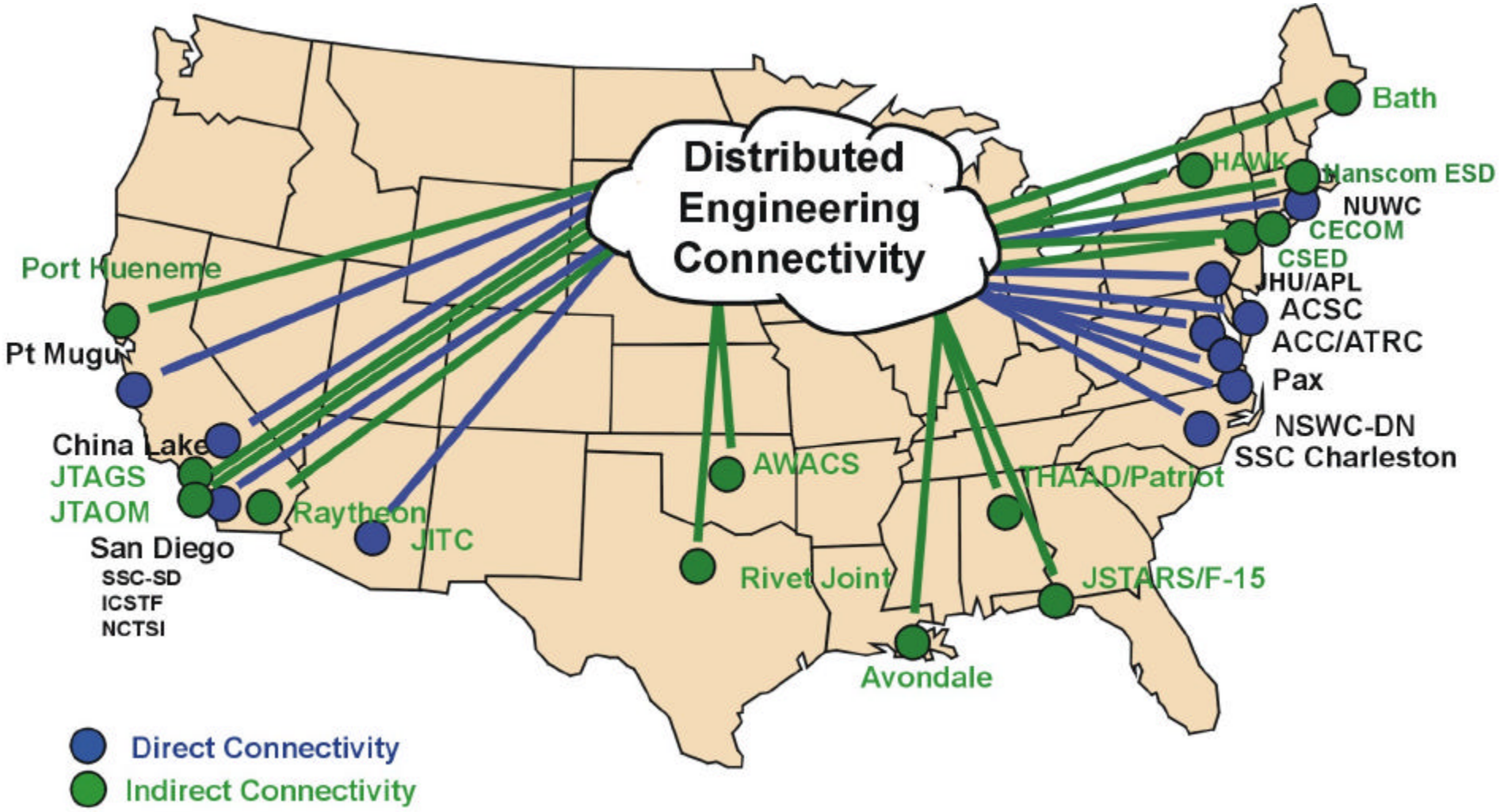
E-2C G2
SSC - San Diego SIF

CG-67 USS SHILOH
SCSC/WI

CVN-72 USS A. LINCOLN
DD-992 USS FLETCHER
ICSTF - San Diego

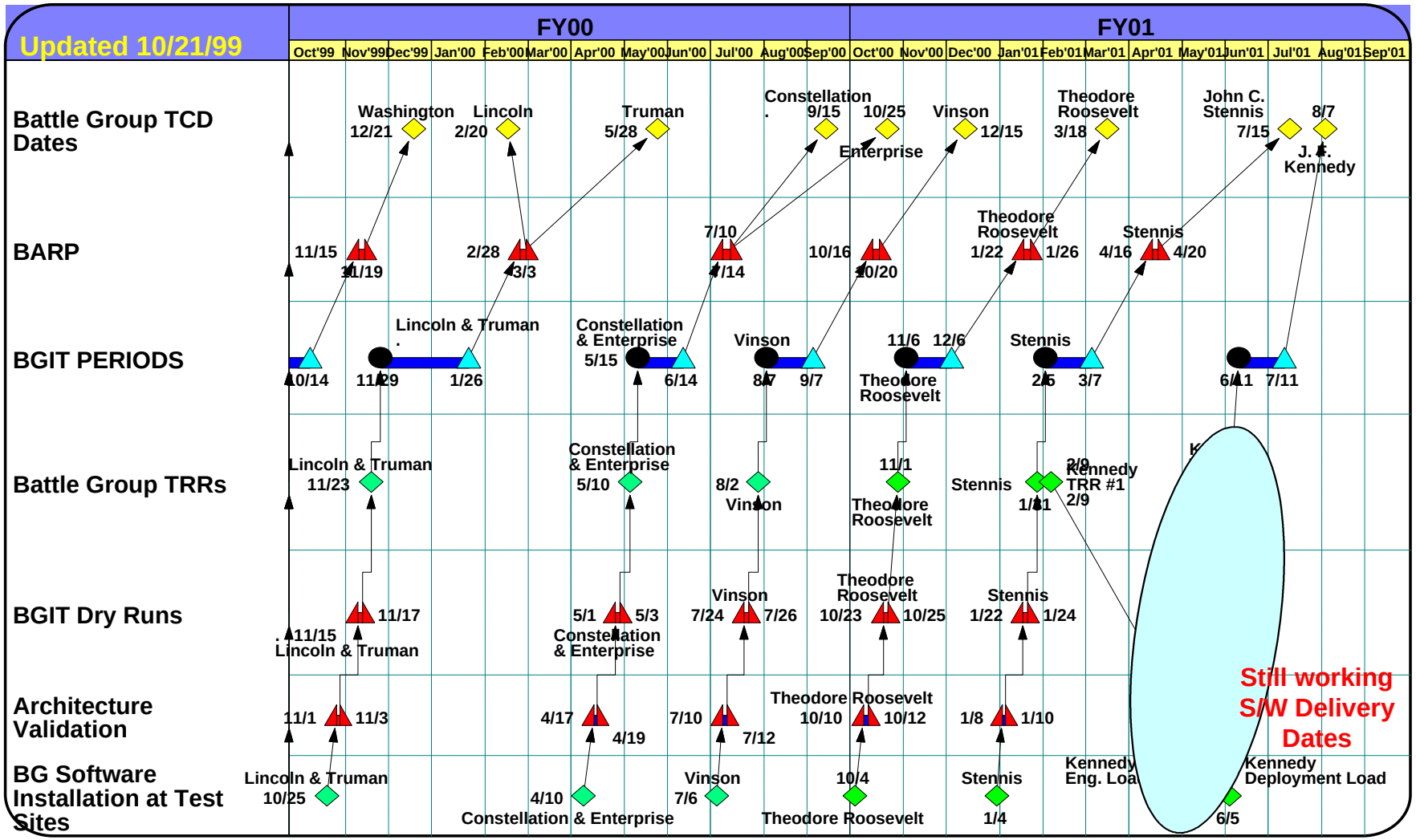
LHA-1 USS TARAWA
FFG-33 JARRETT
FFG-37 CROMMELIN
PHD - Dam Neck

Potential Distributed Engineering Plant Sites



Notional BGIT Schedule

NOTIONAL BGIT SCHEDULE



Action Plan

- Distributed Engineering Plant (DEP)
- Battle Force Action Officers (BFAOs)
- Capabilities & Limitations Document
- Installation Process
- Training

BFAO Roles and Responsibilities

- Enforce the D-30 Process at the Deck Plate Level.
- One of the Primary Points-of-Contact to Battle Force Commander for Interoperability Issues Representing NAVSEA, SPAWAR, NAVAIR and MARCOR Systems Commands.
- The Battle Force Action Officer (BFAO) Serves As a Liaison Between the Fleet and Technical Community, and Facilitates Resolution of Interoperability Issues.
- Maintains Awareness With the CINCs, TYCOMs and SYSCOMs Regarding Battle Force Interoperability, Including EMI, and Monitors Battle Force Baseline Installations. The Intent of This BFAO Role Is to Provide Coordination/Status Between Activities; Not Assume Any Responsibility From Existing CINC, TYCOM or SYSCOM Participants.
- Forecast Interoperability Performance Through Land-Based Engineering and Testing Activities.
- Advise Battle Group Commander and Staff on Resolution of Battle Force Interoperability Issues Within the D-30 Process.
- Generate Weekly Status Report to NAVSEA 53.

BFAO Assignments

KITTY HAWK / BELLEAU WOOD
BFAO: LCDR Frank Thorngren
JTG MGR: LCDR Kurt Miller
PE: Kris Hatakeyama

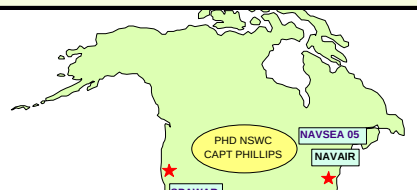
VINSON / PELELIU
BFAO: LCDR Bobby Mullins
JTG MGR: LCDR Kurt Miller
PE: Craig Bleile

LINCOLN / TARAWA
BFAO: LCDR Bobby Mullins
JTG MGR: LCDR Kurt Miller
PE: Scott Beppler

CONSTELLATION / BOXER
BFAO: CDR Frank Valente
JTG MGR: LCDR Jay Sebastyn
PE: Craig Bleile

STENNIS / BONHOMME RICHARD
BFAO: LCDR Frank Thorngren
JTG MGR: LCDR Jay Sebastyn
PE: FCC Adversalo

NIMITZ
BFAO: CDR Frank Valente
JTG MGR: TBD
PE: FCC ADVERSALO



ENTERPRISE / KEARSARGE
BFAO: LCDR Allison Norris
JTG MGR: LCDR Ray Alfaro
PE: Randy Goolsby

EISENHOWER / WASP
BFAO: LCDR Allison Norris
JTG MGR: LCDR Ray Alfaro
PE: Randy Goolsby

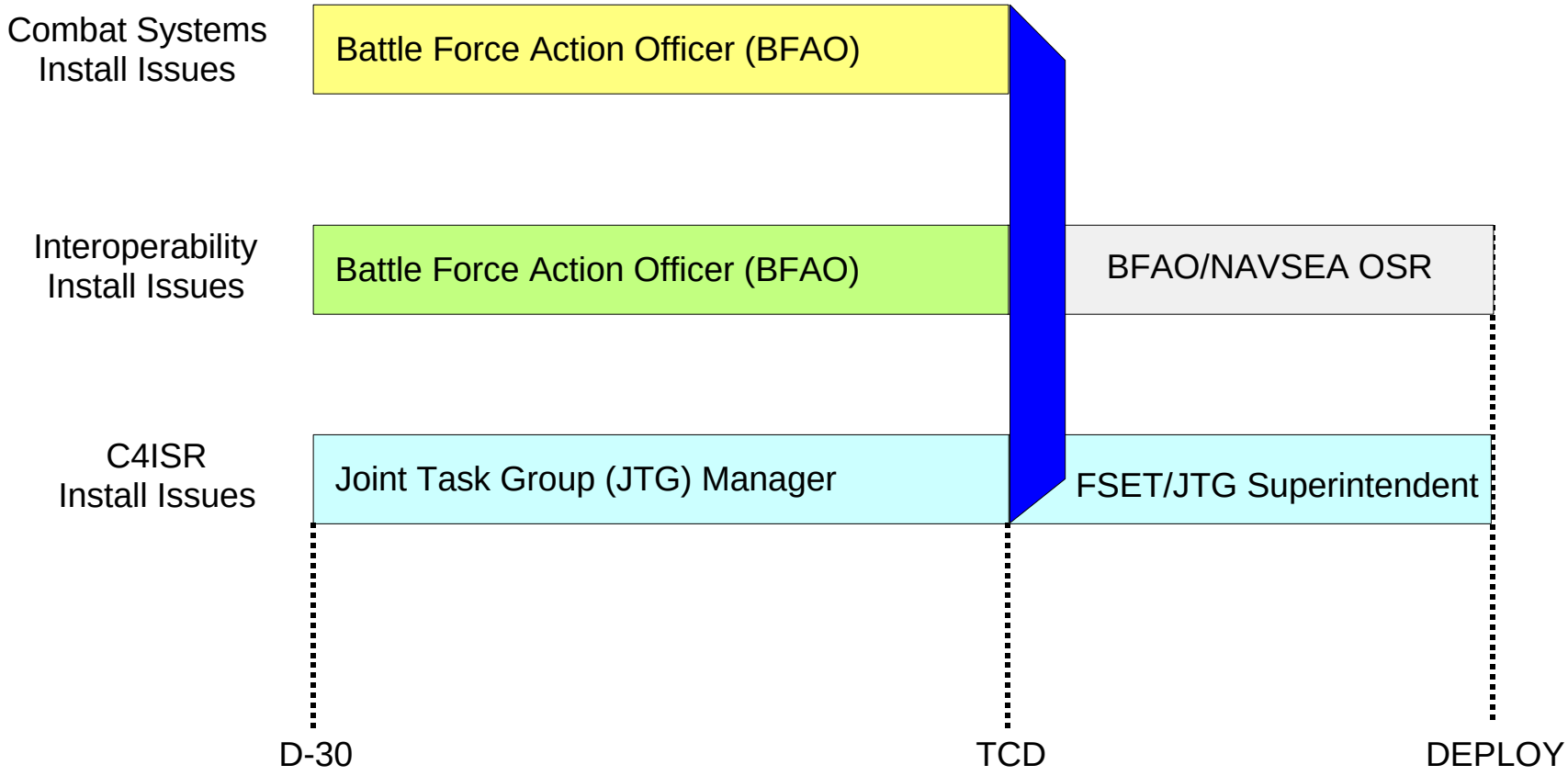
ROOSEVELT / BATAAN
BFAO: CDR Ron Singer
JTG MGR: LCDR Per Provencher
PE: Scott Gordon

WASHINGTON / SAIPAN
BFAO: CDR Ron Singer
JTG MGR: LCDR Per Provencher
PE: Scott Gordon

TRUMAN / NASSAU
BFAO: CDR Ned Ash
JTG MGR: LCDR Per Provencher
PE: Craig Lile

KENNEDY / BATAAN
BFAO: CDR Ned Ash
JTG MGR: LCDR Ray Alfaro
PE: Craig Lile

BFAO and JTG Manager Installations and Interoperability



Action Plan

- Distributed Engineering Plant (DEP)
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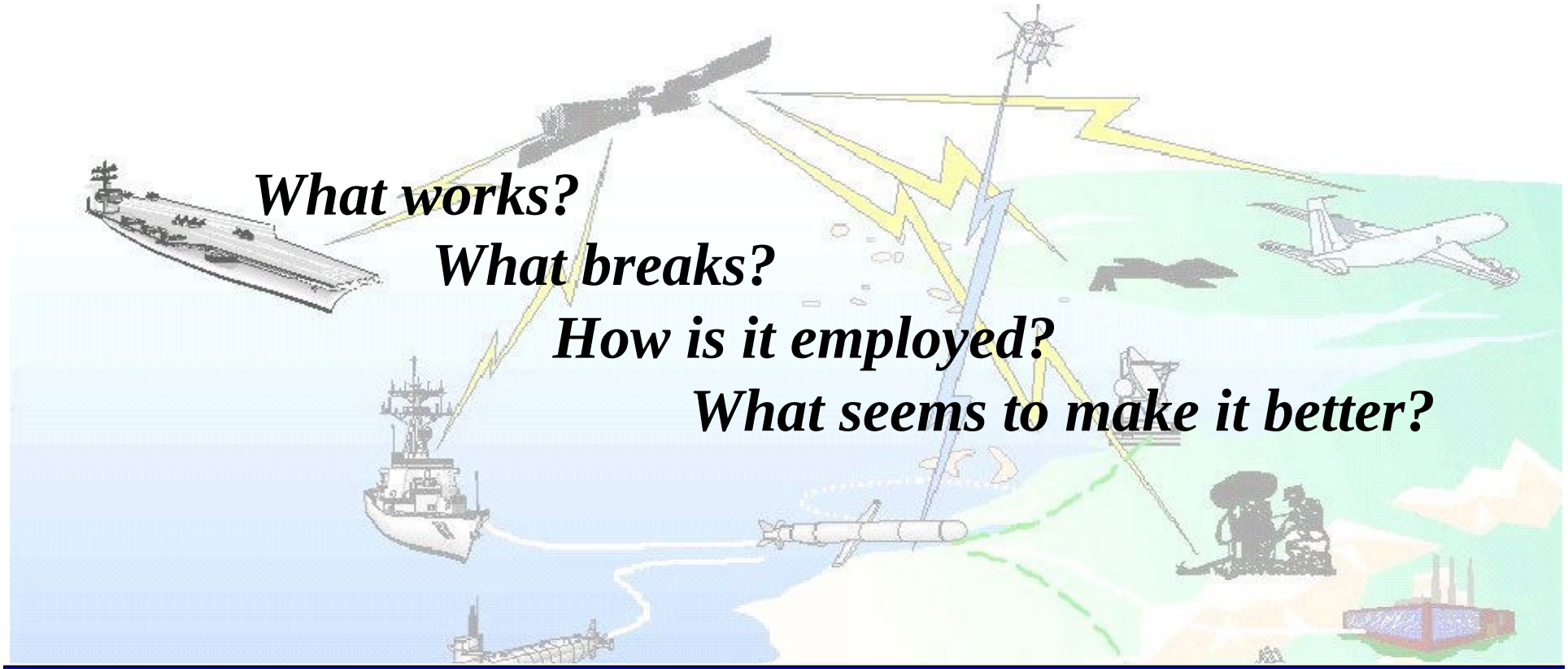
Surface Warfare Center Division

Battle Force
Theater Data Link Operations



If you don't know how information is handled within the lifelines, across the network, and on other platforms… you don't stand a chance of figuring out how information is shared within a Battle Group or across a Joint Battle Force.

Capabilities & Limitations Overview

- **Explain Employment & Interoperability Issues Related To TADILS (Organic Sensors Covered Tangentially).**
  - **How Data Links & Combat Systems Acquire Data…**
  - **How Data Is Processed By Systems Inside The Lifelines…**
  - **How Data Is Fused Into A Coherent Picture Of Battle Space…**
  - **How Data Is Shared & Interpreted By Battle Group/Joint Forces...**
- **Define BG Capabilities & Limitations Based On Force Composition & System Configurations, Provide Hyperlinks to Individual Ship C&L/OP3594 and Joint References.**
- **Identify Where Gaps in Knowledge Exist, Discuss Lessons Learned & Approved Work-Arounds. Provide Trainers, Tacticians & Operators a Comprehensive Reference & Training Tool.**

CAPABILITIES & LIMITATIONS
TECHNICAL FOUNDATION FOR DEVELOPMENT OF TACTICS

C&L Development Partners

System experts provide the hard facts…

we reference those facts to explain TADIL operations.

- **THE FLEET -** ***Operational Observations, Theater Link Architecture***
- **NAVAIR –** ***F-14D / ACR***
- **SPAWAR -** ***SME for DTS/C2P/DNMFL***
- **NCTSI -** ***SME for Link Protocols, STIR***
- **NSWC PHD -** ***SME for AEGIS, CEC, FFG, DD***
- **NSWC PHD (ECO) -** ***SME for FFG, DD, ACDS "anomalies"***
- **NSWC DD -** ***SME for AEGIS "anomalies", CPDD***
- **ATRC -** ***SME for AEGIS, MTT***

Battle Force C&L Fleet Deliveries

Battle Force	C&L Delivery
ENTERPRISE 98	D-0.25
VINSON 98	D-0.5
ROOSEVELT – KEARSARGE 99	D-3.5
CONSTELLATION – PELELIU 99	D-4
KITTY HAWK – BELLEAU WOOD / FDNF	FDNF
KENNEDY – BATAAN 99	D-7
STENNIS - BON HOMME RICHARD 00	D-10
EISENHOWER – WASP 00 (incl. JTFEX)	D-10
WASHINGTON – SAIPAN 00	D-14
LINCOLN – TARAWA 00	D-15
TRUMAN – NASSAU 00	D-16
CONSTELLATION - BOXER 01	D-16 (Dec 99)
ENTERPRISE - KEARSARGE 01	D-17 (Dec 99)
VINSON - PELELIU 01	D-17.5 (Jan 00)
ROOSEVELT - BATAAN 01	D-19 (Feb 00)
KENNEDY - WASP 02	D-23.5 (Feb 00)
STENNIS - BON HOMME RICHARD 02	D-22 (Mar 00)

The C&L is continuously updated on SIPRNET by Subject Matter Experts as new info is learned, in response to changes in force composition, or changes in operational environment.

Each Battle Group asked for earlier delivery – leveling off at about D-18.

Working toward D-26 to communicate to PARMs

INITIAL C&L DELIVERIES PROGRESSING TOWARDS D-26 (FOR BRB)
(15-20 BOOKS MAINTAINED SIMULTANEOUSLY)

NAVSEA
PORT HUENEME
Surface Warfare Center Division

Capabilities & Limitations
Points of Contact

Gordon Whitnall, PhD.
(805) 228-7044 / 8740 fax / 7190 STU-III
whitnallg@phdnswc.navy.mil
whitnallg@phdnswc.navy.smil.mil

Debbie Oberlander
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oberlanderds@phdnswc.navy.mil
oberlanderds@phdnswc.navy.smil.mil

Alexei Schandl
(805) 228-7551 / 8740 fax / 7190 STU-III
schandlak@phdnswc.navy.mil
schandlak@phdnswc.navy.smil.mil

http://www.phdnswc.navy.smil.mil
mirror - http://cnl.mugu.navy.smil.mil

Action Plan

- Distributed Engineering Plant (DEP)
- Battle Force Action Officers (BFAOs)
- Capabilities & Limitations Document
- Installation Process
- Training

NAVSEA AIT Management Program (AMP)

AMP Responsibilities

- Manage Modernization Through a single gatekeeping process
- Generate a BG master list of ALTs that are “certified ready” for install
- Manage a BG installation planning - CNO + follow-on avail
- Validate that alteration package is complete - validate assessment of integrated ship impact of ALTs
- Team with Fleet to maximize the end-to-end process
- Manage process improvement
- Focus all participants on improvements to controlling configuration changes
- Manage resolution of industrial workload problems

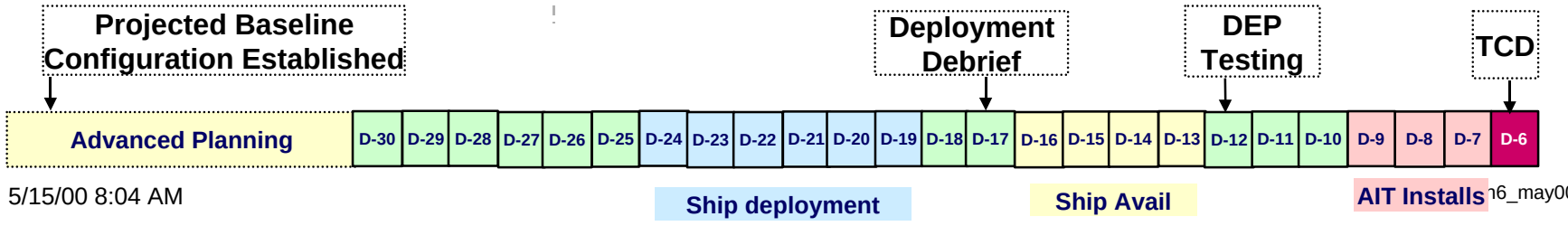
SUPSHIP/PY Responsibilities

- Perform gatekeeping process for avails in naval shipyards and for contracted work through SUPSHIPs
- Coordinate scheduling of install teams
- Integrate install teams with maintenance schedule
- Verify and check-in all install teams
- Verify approval and certification with Fleet CINC, SPM, SEA 05, SEA 04
- Participate in BG installation strategy development

RMMCO Responsibilities

- Perform gatekeeping process
- Coordinate scheduling of install teams
- Integrate install teams with maintenance schedule
- Verify and check-in all install teams
- Verify approval and certification with Fleet CINC, SPM, SEA 05, SEA 04
- Participate in BG installation strategy development

Major Installs will be focused to occur during CNO avails



Action Plan

- Distributed Engineering Plant (DEP)
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Training Guidance

- Interdeployment Training Cycle (IDTC)
- Aegis Training Readiness Center (ATRC) - Link
- Afloat Training Team (ATG)
- Review CANTRAC wrt the Baseline
- Train With Capabilities and Limitations Document
- Integrated Battle Force Training (IBFT) Website
- If POR, Formal Associated Training Is Part of Install (Ref NAVSEA INST 9090.310B)
- If Not POR, Limited On-Site Training From Installation Team.
- OJT and Manuals

Web Sites

Note: Most Web Sites Require Pre-Registration to Gain Access.

http://csmis.rgesvc.com

Access to D-30 baseline info

http://www.phdnswc.navy.smil.mil (siprnet)

Access to Caps and Lims

http://vpo.spawar.navy.mil/04

Access to C4I installation status

http://ringcharts.spawar.navy.mil

Access to lvl 2 ring charts

http://c4iweb.spawar.navy.mil/04/ibft

Access to training issues

http://199.211.108.137/n63b/n63.htm

Access to BGSIT issues

user: bgsit pswd: issues must logon from .mil address

NAVSEA
PORT HUENEME
Surface Warfare Center Division

Summary

- Providing Battle Force Engineering Teams, Led by Battle Force Action Officers for Each Carrier Battle Group
- Supporting Battle Group Interoperability Tests, Assessments, and Fleet Readiness Exercises With Project & System Engineers
- Providing Test Planning and Land-Based Test Sites For Interoperability Distributed Engineering Plant (DEP)
- Developing Documentation and Training Tools to Support Interoperability Training and Battle Group Workups. (Interoperability Capabilities and Limitations)
- Developing a Battle Force Information Network in an Integrated Data Environment (IDE)
- Supporting SEA 53 in Baseline Validation and Defining Battle Group Certification

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APPENDIX H

Acronyms

ACE	Air Combat Element
ACTD	Advanced Concept Technology Demonstration
AIPS	Alteration Installation Planning System
AIT	Alteration Installation Team
AMP	AIT Management Process
AMP	Afloat Management Plan
AMPS	AMP Website (NAVSEA)
ARG	Amphibious Ready Group
ARGSIT	Amphibious Ready Group System Integration Testing
BF	Battle Force
BFAO	Battle Force Action Officer
BF CCB	Battle Force Change Control Board
BF CPG	Battle Force Configuration Planning Group
BFI	Battle Force Interoperability
BFIO	Battle Force Interoperability
BFIT	Battle Force Integration Test
BGIT	Battle Group Integration Testing
BG	Battle Group
BGSIT	Battle Group System Integration Testing
BRB	Baseline Review Board
BUMED	Bureau of Medicine
BUPERS	Bureau of Naval Personnel
C&L	Capabilities and Limitations
C4I	Command, Control, Communications, Computer, and Intelligence
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
CG MEF	Commanding General, Marine Expeditionary Force
CINCLANTFLT	Commander in Chief, U.S. Atlantic Fleet
CNET	Chief on Naval Education and Training
CNO	Chief of Naval Operations
COMCARGRU	Commander, Carrier Group
COMCRUDESGRU	Commander, Cruiser-Destroyer Group
COMMARCORSYSCOM	Commander, Marine Corps Systems Command
COMMARFOR	Commander, Marine Forces
COMPTUEX	Composite Training Unit Exercise
CINCPACFLT	Commander in Chief, U.S. Pacific Fleet
CPG	Configuration Planning Group

CSSCCB	Combat System Software Change Control Board
CSD	Consolidated Software Deliveries
CSIT	Combat System Integration Testing
CSRR	Combat System Readiness Review
CVBG	Carrier Battle Group
DEP	Distributed Engineering Plant
DRPM	Direct Reporting Program Managers
DESRON	Destroyer Squadron
FDRR	Fleet Delivery Readiness Review
FIT	Final Integration Testing
FLTCINC	Fleet Commander-in-Chief
FLEETEX	Fleet Exercise
FMP	Field Management Plan
FMP	Fleet Modernization Program
FMPMIS	Fleet Modernization Program Management Information System
G&PP	Guidance and Policy Paper
IBC	Initial Baseline Configuration
IBFT	Integrated Battle Force Training
IBR	Initial Baseline Review
IDTC	Inter-Deployment Training Cycle
ISIC	Immediate Superior in Command
JTFEX	Joint Task Force Exercise
LAN	Local Area Network
MCMRON	Mine Counter Measures Squadron
MEF	Middle East Force
MEFSAG	Middle East Force Surface Action Group
MEU	Marine Expeditionary Unit
MIWRG	Mine Warfare Readiness Group
NAVAIR	Naval Air Systems Command
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
NFC	Numbered Fleet Commander
NMIMC	Navy Medical Information Management Command
ORDALT	Ordnance Alteration
OSR	On Site Representative(for NAVSEA 53)
PACMEF	Pacific Middle East Force
PE	Project Engineer (NAVSEA Port Hueneme)
PEO	Program Executive Officer
PHD NSWC	Port Hueneme Division, Naval Surface Warfare Center (now NAVSEA Port Hueneme)
PHIBGRU	Amphibious Group
PHIBRON	Amphibious Squadron
PM	Program Manager
POA&M	Plan of Action & Milestones
POR	Program of Record
ORDALT	Ordnance Alteration

SAR	Ship Alteration Record
SCP	Software Certification Program (will replace SQI Program)
SE	System Engineer (NAVSEA Port Hueneme)
SHIPALT	Ship Alteration
SIDs	Ship's Installation Drawings
SOVT	System Operation Verification Testing
SPAWAR	Space and Naval Warfare Systems Command
SQI	Software Quality Improvement (Program)
SYSCOM	Systems Command
TCD	Target Configuration Date
TLS	Timeline Summary
TYCOM	Type Commander
UNITAS	Joint United States-Latin American Naval Exercise
VTC	Video Tele-Conference

TAB A

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YN3	Ray	Brantley		CCG 6					FLAG YN
CDR	Thomas F.	Cosgrove Jr.		CCG 6					TFCC OFFICER
LCDR	Ed J.	Daum		CCG 6					INTEL OPS
LCDR	Stephen F.	Davis		CCG 6					SURF OPS
CDR	John W.	De Neale		CCG 6					ACOS C2W
LCDR	Scott F.	Dipert		CCG 6					CRYPTOLOGIST
EWCM	Mark	Dubiel		CCG 6					ASST. EWO
CAPT	Bill B.	Evers		CCG 6					OPS ACOS
LN1	Caroline	Everson		CCG 6					LEGAL ASST.
OS2	Bobby	Fikes		CCG 6					ASST. TFCC
LT	Steve	Finco		CCG 6					FLAG LT
MS1	Jeffery	Fisher		CCG 6					FLAG MESS
CDR	Lisa E.	Frailey		CCG 6					METOC
MSC	Randy	Gagnier		CCG 6					FSO
LT	Charles W.	Gill		CCG 6					COMMO
LCDR	Parke L.	Guthner		CCG 6					ACOS MTRL
IS1	Michael	Harris		CCG 6					FLAG LPO
OSC	Robert	Harris		CCG 6					ASST. TFCC
LT	Scott	Herzog		CCG 6					EWO
LT	Patrick J.	Hodgson		CCG 6					EMO
OS2	Lindell	Hooks		CCG 6					ASST. TFCC
LCDR	Bill D.	Johns		CCG 6					Secretary
RM1	Darrel	Johnson		CCG 6					RADIO SUP
RADM	John	Johnson		CCG 6					BG CDR
CAPT	James C.	Kane		CCG 6					COS
Dr.	Helen	Karppi		CCG 6					CAN REP
RM1	Donnie	Lewis		CCG 6					RADIO SUP
SK1	Ronaldo	Lor		CCG 6					FLAG MAT
LT	Scott A.	Margulis		CCG 6					ASST. AIR
YNCS	P. J.	Martin		CCG 6					WRITER
RM2	Emerson	Mason		CCG 6					FLAG RM
LT	Dean C.	Matousek		CCG 6					STRIKE OPS

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OS2	Harold	Neeley		CCG 6					ASST. TFCC
OS1	Derek	Newell		CCG 6					ASST.TFCC SUP
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RM2	Bryan	Ohagen		CCG 6					LAN ADMIN
LCDR	Mike	Palmer		CCG 6					JAG
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CAPT	David E.	Rifkin		CCG 6					SUB OPS
CDR	Eric	Rosenlof		CCG 6					SURFACE
MS2	William	Sharon		CCG 6					FLAG MESS
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RMCS	Eluid	Torres		CCG 6					ASST. COMMO
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OS2	Guy	West III		CCG 6					ASST. TFCC
CDR	Tim A.	White		CCG 6					AIR OPS
RADM	Jay	Campbell		CCG 7					BG CDR
RADM	W.	Copeland		CCG 8					BG CDR
RADM	Michael D.	Malone		CCG 8					BG Commander
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*ADD ".SMIL" FOR SIPRNET

TAB B

List of Websites

D-30 Baseline Information
http://amps.navsea.navy.mil

Collaborative Site at PHD NSWC for Events, Milestones, POCs
https://bfe.phdnswc.navy.mil/

Capabilities and Limitations
http://www.phdnswc.navy.smil.mil (siprnet)

C4I Installation Status
http://vpo.spawar.navy.mil/04

Level 2 Ring Charts
http://ringcharts.spawar.navy.mil

all SPAWAR Sites
https://vpo.spawar.navy.mil/vpopages.nsf/all/$file/start.html

Training Issues
http://c4iweb.spawar.navy.mil/04/ibft

BGSIT Sites

LANT
http://www02.clf.navy.mil/clfn66
LOGIN: CLFN66 READER
PASSWORD apply for password

PAC
http://199.211.108.137/n63b/n63.htm
LOGIN bgsit
PASSWORD apply for password

Fleet Support Engineering Team
http://www.fset.navy.mil

TAB C

Assessment and The Assessment Brief Templates

There are regular assessments and ad hoc assessments that are done by PHD NSWC during the D-30 cycle.

The initial assessment is the IBR Assessment with a draft used at the pre-IBR. The issues in the IBR assessment are updated for the D-25 and the BRB. PHD NSWC will provide an assessment and presentation in support of NAVSEA 53's D-7 Preliminary and D-1 Final Certification. The first of these assessments will be in early FY01 for CON01.

Adhoc assessments are done when there is a ship swapout or addition to a Battle Force.

This tab has recent samples of these assessments and the briefs for the following events:

- Tab C-1 IBR Assessment and Presentation
- Tab C-2 BRB Assessment and Presentation
- Tab C-3 Adhoc Assessment

USS LINCOLN BATTLE FORCE 2002
INITIAL BASELINE REVIEW (IBR)
ASSESSMENT

Prepared by
PHD NSWC Code 4L31
Battle Force Action Office
29 February 2000

TABLE OF CONTENTS

1.0 PURPOSE

This assessment has been prepared for the Initial Baseline Review (IBR) scheduled for 02 March 2000. This assessment discusses significant new capabilities, interoperability characteristics of the Battle Force (BF) as a system and significant Battle Force and system issues.

2.0 EXECUTIVE SUMMARY

2.1 Composition

The composition for ABRAHAM LINCOLN 2002 (LIN02) BF was originally established by CINCPACFLT 241942Z NOV 99 and later modified by CINCPACFLT 161745Z FEB 00. Per the latter message, MCCLUSKY will now be transferred to Naval Reserve Force (NRF) status by end of FY03 and will no longer require a SECNAV waiver for installations due to decommissioning. In addition, the February message added USS MOUNT VERNON (LSD 39) to the BELLEAU WOOD ARG and deleted USS RUSHMORE (LSD 47). MOUNT VERNON is an Anchorage Class LSD delivered in 1972. RUSHMORE is a Whidbey Island Class LSD delivered in 1991.

Also, a NAVAIR presentation transmitted in an e-mail of 7 February, listed composition changes within Carrier Air Wing 14, primarily to add F-18Es and to delay introduction of additional Link 16 aircraft until 2003. The resulting composition can be seen in the Target Link Architecture (Appendix A).

2.2 Configuration

The draft Combat Systems baseline configuration was obtained from the NAVSEA Afloat Master Plan (AMP) database as a result of the current data call. Where data call responses had not been received, some fill in information was used from other sources.

The addition of LASSEN, a Baseline 6 Phase 1 Destroyer, creates a Battle Force configuration that has not yet been tested at BGIT nor deployed as a core ship of a BG. Land based testing involving Baseline 6 Phase 1 Destroyers needs to be monitored carefully for issues that may apply to the LIN02 Battle Force. Similarly, AEGIS Weapon System Baseline 5.3.8 and ACDS Block 0 version 10.24 have not yet been through BGIT and should be monitored.

BELLEAU WOOD will have ACDS Block 0 installed (in place of ITAWDS) and must receive the associated TAS version 14 computer program. The late change adding MOUNT VERNON eliminates the self defense capability provided by RAM and AN/SPS 49 radar contribution to the BG surveillance picture. MOUNT VERNON does not have a Tactical Data Link capability.

2.3 Issues

The primary interoperability issues that apply to this Battle Force are: Lack of Dual Net Multi-Frequency Link 11 (DN MFL) Capability, ID Conflict Resolution – Change Data Orders, Degraded Position Location Information, Intra-ARG Connectivity, ACDS Mode 2 Decorrelation and Numerous, Minor ACDS Block 0 Level 10 Problems. Additional information on these issues is provided in the Battle Force Issues section and in Appendix D.

The most prominent EMI issues are AN/SPS-48E Interference to CA-III in BELLEAU WOOD and LINCOLN, Mk23 TAS Interference to INMARSAT in LINCOLN, FLETCHER, and CAMDEN, and Mk 23 TAS to Digital Wideband Transmission System (DWTS) in BELLEAU WOOD. Details are in Appendix B.

Relevant Battle Group Systems Integration Test (BGSIT) information includes open items on Battle Force ships from their recent BGSITs and also multi-ship issues for systems on similar BF baselines from recent BGSITs. (This BGSIT information is in Appendix C). Updated information has been requested from the Program Managers as part of the data call.

3.0 COMPOSITION AND CONFIGURATION

The composition for ABRAHAM LINCOLN 2002 (LIN02) BF was originally established by CINCPACFLT 241942Z NOV 99. The message also established TCDs as follows:

- LINCOLN Battle Group (BG) – 15 December 2001,
- BELLEAU WOOD Amphibious Ready Group (ARG) – 15 November 2001,
- Middle East Force (MEF) 02-2 – 28 February 2002, and
- Counter Narcotics Joint Inter-Agency Task Force (JIATF) EAST (CN JIATF E) MCCLUSKY (FFG 41) – 15 November 2001/ INGRAHAM (FFG 61) 15 April 2001.

The composition was modified by CINCPACFLT 161745Z FEB 00 which substituted MOUNT VERNON (LSD 39) for RUSHMORE (LSD 47) and noted that MCCLUSKY will now be transferred to the Naval Reserve Force by the end of FY 03 (vice decommissioning). As a result, MCCLUSKY will no longer require a SECNAV waiver for installations.

The draft Combat Systems baseline configuration was obtained from the NAVSEA Afloat Master Plan (AMP) database as a result of the current data call. To fill in where data call responses had not been received, such as AEGIS Weapon System and all SPAWAR systems, some other sources have been used.

The most significant change in LIN 02 BF composition (from LINCOLN 00 Battle Force) is a new ARG of BELLEAU WOOD, DENVER and MOUNT VERNON, and only one associated MEF (vice three). Upgrades to the MOUNT VERNON have not been identified due to the late addition of this ship to the ARG. However, the differences in ship classes indicate a diminished self defense capability and reduced radar surveillance coverage. There are several FY 02 installations listed in plans. FY 02 installations need to be accomplished and stable before the TCDs; otherwise, the installation may need to slip until after the deployment, i.e., FY03.

4.0 SIGNIFICANT NEW CAPABILITES

4.1 AEGIS Weapon System (AWS)

SHILOH, PAUL HAMILTON, HIGGINS, and FITZGERALD will have AWS Baseline 5.3.8. LASSEN will have Baseline 6A1.1. BUNKER HILL will have Baseline 2.10.2. Baseline 5.3.8 is a Baseline 5 Phase III limited scope cleanup of issues discovered through Baseline 5.3.7 testing. Baseline 5.3.7 corrected all Priority 1 and 2 CPCRs and all high priority or high visibility interoperability CPCRs that had been discovered in Baseline 5.3.6. Baseline 5.3.7.1 corrected two high priority Computer Program Change Requests (CPCRs) related to Illuminator scheduling (WCS G3474) and change data orders (CND 88784) and also completed the integration with the associated Command and Control Processor (C2P). Baseline 5.3.7.2 corrected a Y2K-related February 28th - February 29th rollover anomaly (C&D CPCR 88346).

Baseline 6A1.1 in LASSEN adds several improvements to the AEGIS Weapon System in the following functional areas: low elevation, SM-2 (minimum range reduction), kill evaluation, and auto special mode (reaction time reduction). The baseline also integrates BFTT, and includes an ID Upgrade (Phase I), Kingfisher integration, VLS Phase V, A-Scope Synthetic Display, ORTS upgrade to TAC-4's, and ATWCS Phase II.

The Baseline 2.10.2 computer program for BUNKER HILL corrects 86 CPCRs and is an update to support deployment requirements for Baseline 2 cruisers configured with the SARTIS capability. SARTIS is a radar track discriminator system that provides for recognition of non-cooperative aircraft. In most cases, cooperative IFF responses will no longer be required for Combat ID.

The Area Air Defense Commander (AADC) system prototype is installed in SHILOH. This system will be used in the LINCOLN 00 RIMPAC exercises in June 00 and can be expected to still be in SHILOH for the 02 deployment.

4.2 Command and Control Processor (C2P)

SHILOH, PAUL HAMILTON, HIGGINS and FITZGERALD will have C2P Rehost program version R5R5. This is a major upgrade to the existing R5R3 C2P(R) Rehost program. New capabilities include UHF Satellite TADIL-J, the Aircraft Control Revision (ACR), an interface to the Common Data Link Management System (CDLMS), and the Common Shipboard Data Terminal Set (CSDTS). In addition, the program provides a large number of high priority Trouble Report (TR) fixes. R5R5 is based on the UYK-43 C2P Program M5R4, which has successfully completed Navy Link Certification as a part of AWS Baseline 5.3.7.

4.3 AN/SYQ-20(V) Advanced Combat Direction Systems (ACDS) Block 0 (Level 10)

Version A10.24 is planned for LINCOLN and BELLEAU WOOD. The 10.24 program upgrade is being developed to consolidate the common library and to correct high priority TRs. In addition, corrections to the associated Command and Control Processor (C2P) software program (M4R407A06) will provide approved Satellite TADIL-J (S TADIL-J) capability.

In BELLEAU WOOD, there will be a swap out of ITAWDS equipment for ACDS Block 0 equipment. The exact configuration of the AN/SYQ-20 (V) has not been identified as to being similar to the TARAWA or the East Coast LHAs. SGS/AC with computer program version 3.6.2R4 is also being installed.

4.5 FFG Combat System Software Upgrades

CROMMELIN will receive AN/SYQ-20(V) CDS Level 120001X. INGRAHAM will receive Level 130004X. The MCCLUSKY will remain at CDS Level 7.

CDS Level 120001X in CROMMELIN updates level 10 software to consolidate WCP/WAP, provides UYK-43 native mode and provides data extraction/reduction capabilities

4.6 AN/WSN-7(V) Ring Laser Gyro Navigation (RLGN)

The RLGN is installed in LINCOLN, SHILOH, all four DDGs, and will be installed in BUNKER HILL, FLETCHER, and CHEYENNE. PASADENA is currently scheduled to receive the RLGN in Dec 02; this date needs to be moved prior to TCD. BELLEAU WOOD is not scheduled for the RLGN installation until November 05. RLGN is a passive navigation system that provides ship's position, attitude, heading, and velocity to combat system. It also provides a look ahead capability that predicts ship’s position up to one second in the future. This capability allows NAVSSI the processing and network distribution time required by a networked system information distribution. RLGN also improves RM&A.

4.7 AN/SPS-49(V)5 Radar Medium PRF Upgrade (MPU)

LINCOLN and INGRAHAM will have MPU installed. The AN/SPS-49(V)5 Radar Medium PRF Upgrade (MPU) is a technical improvement to reduce the number of false contacts being sent by the radar to the rest of the combat system without reducing the radar's sensitivity to small, low, close-in contacts.

4.8 AN/SPS 48E 3D Radar

BELLEAU WOOD AN/SPS 48E is being upgraded to version (V)9 and the program is being revised to 26.G.00/01.02.51.02. The AN/SYS 2 is being updated to AN/SYS-2(V)7 IADT W/FC2 and the program updated to 006.00.01A/02.13.01. Integration of these upgrades with ACDS 10.24 needs to be verified at CSIT.

4.9 Track Initiation Processor (TIP)

TIP is in SHILOH, and will be in LASSEN and PAUL HAMILTON, but not until sometime in FY 02. TIP is applicable to FITZGERALD, but is not scheduled. TIP enhances SPY-1Bs ability to detect slow moving target and small targets in sea clutter conditions. This reduces the clutter track and transition-to-track load on the computer. TIP allows the radar to operate with greater sensitivity under all sea and land clutter conditions.

4.10 AN/SSN-6 Block 3 Navigational Sensor System Interface (NAVSSI Block 3)

NAVSSI Block 3 is already installed in LINCOLN, PAUL HAMILTON, FITZGERALD, and HIGGINS. NAVSSI is planned for installation in CAMDEN (in FY02) and in LASSEN. The NAVSSI Block 3 upgrade will expand the number of navigation data sources and user systems supported by NAVSSI. The upgrade incorporates a Global Positioning System (GPS) receiver capability directly into the NAVSSI system. It has refined algorithms that are used to calculate an integrated navigational solution and it further expands the navigation tools available to the ship's navigation team.

4.11 Digital Modular Radio (DMR)

DMR is planned to be installed BELLEAU WOOD and DENVER. DMR addresses many operational and logistical issues. DMR achieves this by allowing one common radio to be programmed to transmit and receive in different bands. From a logistics standpoint, one radio replacing many achieves parts and training economies of scale. From an operational perspective, DMR allows the flexibility to change radiation bands dynamically as needed to adjust to the mission requirements of the moment.

4.12 MK 31 Rolling Airframe Missile (RAM) Guided Missile Weapon System (GMWS) Blk 1

FLETCHER will have RAM Block 1 installed. RAM Block 1 Infrared (IR) upgrade incorporates a new IR all-the-way-homing guidance mode to improve AAW performance against evolving passive and active Anti-ship Cruise Missiles (ASCMs). The Block 1 missile retains all capabilities of the Block 0 missile while adding two guidance modes, IR only and IR Dual Mode Enable (IRDM). The IR-only mode guides on the IR signature of the ASCM. The IRDM will guide on the IR signature of the ASCM while retaining the capability of utilizing RF guidance if the ASCM RF signature becomes adequate to guide on. RAM Block 1 can be launched in an IR all-the-way mode, as well as the dual mode (passive RF, followed by passive IR) used by Block 0.

4.13 AN/SWQ-1(V)1 Afloat Planning System (APS)

Hardware and software upgrade to Afloat Planning System (APS) coordinated with the JSIPS-N (Joint Services Imagery Processing System - Navy) upgrade in LINCOLN provides the BG commander with improved capability to plan Tomahawk Land Attack Missile (TLAM) missions afloat. JSIPS-N adds capability to receive process, exploit, store, and disseminate imagery, imagery-derived products, and Imagery Intelligence (IMINT) reports based on multiple source imagery from multiple inputs.

4.14 MK 23 Target Acquisition System (TAS) OCP

TAS Version 14 will be installed in CAMDEN and FLETCHER in FY 00 and Version 15 in FLETCHER in FY 01.For FLETCHER, the main reason for Version 15 is to integrate TAS with RAM Block 1 that is being installed in FLETCHER.

Version 0716-5R07.3 is in BELLEAU WOOD, but Version 14 is not planned until FY 03. Version 14 corrects outstanding issues among TAS, NSSMS and RAM GMWS. TAS Version 5R07.3 in BELLEAU WOOD is correct until ACDS Block 0 is installed thus requiring version 14. ACDS Block 0 shows in the AMP database for installation in FY01, but the associated TAS version 14 shows as FY 03 for installation. This is a disconnect which needs to be investigated.

4.15 Other SPAWAR C4I Systems

This assessment does not address many SPAWAR systems that are not yet part of the data call response. The systems of interest are mainly communications, networking and Radio Frequency management. The capabilities that some of these systems bring are listed below.

4.15.1 Integrated Ship Network System (ISNS)

The new Battle Force ship LANs, together with communications and networking systems that are part of ISNS, will provide Non-secure Integrated Protocol Router Network (NIPRNET) and Secret Integrated Protocol Router Network (SIPRNET) connectivity.

4.15.2 Extremely High Frequency (EHF) Medium Data Rate (MDR) SATCOM Terminal

EHF MDR is an upgrade of the EHF Low Data Rate (LDR) system that provides T-1 throughput of up to 1.544 Megabits per second (Mbps).

4.15.3 AN/SRC-54B Single Channel Ground and Airborne Radio System (SINCGARS)

SINCGARS replaces VRC-46 radios and brings frequency hopping and jam resistant voice communications between ship and shore. In addition, the SINCGARS Improvement Program (SIP) brings the ability to integrate and share data via Transmission Control Protocol/ Internet Protocol (TCP/IP).

4.15.4 Satellite TADIL-J (S TADIL-J)

S-TADIL-J provides a significant improvement to BF connectivity. Satellite TADIL-J enables beyond Line-Of-Sight (LOS) ranges when airborne relays (such as E-2C) are not available. Satellite TADIL-J supports the full two-way exchange of Link 16 information over 25 Khz Ultra High Frequency (UHF) Demand Assigned Multiple Access (DAMA) channels. Satellite TADIL-J supports concurrent real-time LOS link 16 and S-TADIL-J operations to provide seamless TADIL connectivity as Link 16 LOS is lost and regained, thereby expanding a BG's tactical horizon to limits of the combat system.

4.15.5 Digital Wideband Transmission System (DWTS)

The Digital Wideband Transmission System (DWTS) is a high capacity Line of Sight data transmission system that provides afloat and ashore commanders with data and voice communications paths. There are EMI and systems issues regarding DWTS. CNSP 081532Z DEC 99 recommended that "further DWTS installs on PACFLT amphibious platforms be halted until DWTS is fully functional and can meet stated operational requirements. Until DWTS full functionality can be achieved, recommend UHF-MDR capability be installed in TARAWA ARG/MEU". CPF 141906Z DEC 99 concurred and noted that "providing the required capability of voice, video and data line of sight connectivity between all ships of the ARG is essential to mission". CNSP 182004Z Jan 00 recommended installation and testing of an improved DWTS in the ships of the BOXER and PELELIU ARGS. "Pending successful test results on improved DWTS performance from BOXER and PELELIU ARGS, authorization for follow on DWTS installs will be reviewed." CPF 010058Z FEB 00. gave "authorization to proceed with DWTS installations on the ships of the BOXER, PELELIU, and FDNF ARGS".

5.0 MISSION AREA SHORTFALLS

5. 1 MINE WARFARE (MIW) continues to remain a serious shortfall. The Battle Force brings no organic capabilities, and therefore must rely on in-theater assets, leaving it extremely vulnerable to the offensive mine threat. However, COMINEWARCOM (CMWC) has recognized this shortfall and has taken steps to improve the situation. In addition to the forward-deployed MIW assets in both 6th and 7th Fleets, CMWC has begun designating deployable MIW Readiness Groups, which prepare for deployment, following the D-20 process, in a fashion similar to the deploying BFs. As they transition to the full D-30 process, and are more integrated into a BF mentality, this should help improve the BF MIW posture.

6.0 Battle Force Interoperability Issues

The active issues for this Battle Force are indexed and summarized below. The full text of the associated issue papers is at Appendix D.

BF Issue #	*Issue Title*
001	Lack of Dual Net Link 11 Capability
002	Data Registration/Gridlock Problems
003	ID Conflict Resolution – Change Data Orders
004	Space Track Implementation
005	Degraded Position Location Information
006	Air Control Interoperability Problems
008	Intra-ARG Connectivity
010	ACDS MODE 2 De-correlation
011	Numerous, Minor ACDS BLK 0 LVL 10 Problems

BF- 001 Issue: Lack of Dual Net Link 11 Capability

All major Theater net architectures (Joint Task Force/South West Asia (JTF/SWA), Korean, and recently, the Adriatic) incorporate Dual Link 11 nets. Installation of Dual Net Multi-Frequency (DN MFL) suites (two per BG minimum) is required. There are insufficient DN MFL suites available and there are currently no Dual Net capabilities for Model 5 ships.

BF- 002 Issue: Data Registration/Gridlock Problems

Data Registration is the process of aligning coordinate systems so that all units participating in a TADIL have a common reference frame. TADIL A and TADIL J (Links 11 and 16) use very different Data Registration methods. To date, only the Group 2 E2Cs and ACDS Blk 1 ships even attempt to perform true TADIL J data registration (their specs indicate they perform Link 16 data registration). While bringing Navy units into compliance with TADIL J standards should help some Joint data registration problems, it is not at all clear that such action alone will solve the problem. Data Registration and Gridlock will remain problematic, particularly in the Joint environment, until all units perform Link 16 data registration. A common Data Registration methodology is required.

BF- 003 Issue: ID Conflict Resolution – Change Data Orders

Not all units in a Battle Force correctly respond to ID changes. This leads to almost continuous ID conflicts across the BF, which confuses the picture and burdens operators. Frequently, those in tactical command may be completely unaware that the ID of a given track is in dispute. Immediate improvement can be gained by ensuring all units correctly respond to Change Data Orders (CDOs).

BF- 004 Issue: Space Track Implementation

Space Surveillance is limited. While all AEGIS ships can track “Space Objects” (and a few “Linebacker” units can truly plan surveillance and respond to cueing), very few non-AEGIS units can process Link Space Track messages. No other Navy units can process this data across the TADILs (neither the track itself nor the “launch and crater” points), although GCCS-M units can see the data, time late. In particular the Carrier cannot see the TADIL Space Track picture since neither ACDS Blk 0 or 1 processes Space Tracks.

BF- 005 Issue: Degraded Position Location Information

USN upgrade to EPLRS is not totally funded. Unless EPLRS installations are accelerated, USN will deploy mixed PLRS and EPLRS Battle Forces. While PLRS and EPLRS are minimally compatible, the insertion of any PLRS units into an EPLRS network brings network performance down to the lowest common denominator. According to the current schedule, DENVER will have AN/KSQ-1 AADS with EPLRS, but BELLEAU WOOD and MOUNT VERNON will not have any portion of AADS, PLRS or EPLRS. Installation of EPLRS in BELLEAU WOOD and MOUNT VERNON should be accelerated to provide full EPLRS capability to the ARG.

BF- 006 Issue: Air Control Interoperability Problems

The introduction of Air Control Revision (ACR) software on Link 16 capable aircraft may cause interoperability problems with other units in the fleet. Battle Forces will deploy with a mix of ACR and non-ACR aircraft, and Model 4 and Model 5 ships. Testing must be completed on all mixes of ACR/non-ACR aircraft and Model 4/5 ships.

BF- 008 Issue: Intra-ARG Connectivity

Operational need for Intra-ARG VTC capability was established by CINCPACFLT 202028Z Apr 99, CINCLANTFLT 232337Z Apr 99 and OPNAV 0520208Z May 99. Requirement for Digital Wideband Transmission System (DWTS) to support voice, video and data has been, and continues to be, an operational requirement for ARG/MEU to support the Rapid Response Planning Process (R2P2).

BF- 010 Issue: ACDS MODE 2 De-correlation

The Advanced Combat Direction System (both BLK 0 and BLK 1) performs an automatic decorrelation of mutual tracks when a Mode 2 conflict occurs (in accordance with specs). Due in part to chronically poor IFF/Radar association, this decorrelation results in the generation of multiple dual track situations.

BF- 011 Issue: Numerous, Minor ACDS BLK 0 Level 10 Problems

ACDS BLK 0 LVL 10 has several known issues that are minor separately, but severe in culmination. Issues need to be addressed in future revisions.

7.0 APPENDICES SUMMARY

7.1 Appendix A Target Link Architecture

The table on the next page provides a summary of what units have what links and the details of the link configuration.

Overall, improvements in AWS baselines in the progression through Baseline 5.3.7 to Baselines 5.3.8 and 6 phase 1 (for all AEGIS ships), as well as the delivery of version A10.24 for the ACDS ships is expected to maximize available capability, and minimize the number of work-arounds. Improvements from the BFE effort will come from DEP events, the link certification process, as well as the focused effort on minimizing baselines within a BF.

7.2 Appendix B EMI Issues Status

The status (corrected, funded, unfunded) of significant EMI issues for the LINCOLN/BELLEAU WOOD 02 BF are shown in tables.

7.3 Appendix C BGSIT Issues Status

The status of BGSIT issues is shown in two tables. The first is a table for open items on ships in the 02 Battle Force obtained from recent BGSITs for ship. The longer table contains open interoperability issues extracted from BGSITS on Battle Forces similar to the LIN02. Similar Battle Forces includes all ACDS BLK 0 /AWS 5.3.6 BF from 1998 to date. The data are current from CINCPACFLT database and message traffic through 25 January. The data were provided to the PMs and PEOs via SEA 53 as part of the data call and status responses were requested.

7.4 Appendix D Interoperability Issue Papers

This appendix provides full text of the issues highlighted and summarized in the main document.

7.1 Appendix A – Target Link Architecture

LINCOLN / BELLEAU WOOD BF Deployment 06/2002 02 REV: 02/29/00		Combat System		LINK 16				Link 11					Link 4	CEC		EPLRS	Notes
		Type	Software	Hardware	Software	CDLMS	SAT-J	Terminal	STM	SAT-A	MFL	DNL		USG	SW		
CVBG SHIPS																	
CVN 72	ABRAHAM LINCOLN	ACDS	A10.24	C2P	M4R408A06		Y	USQ-125v4	Y	Y			Y				
CG 67	SHILOH	AWS	5.3.8	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y				
CG 52	BUNKER HILL	AWS	2.10.2	C2P	M4R408A06		Y	USQ-125v4	Y	Y			Y				
DDG 60	PAUL HAMILTON	AWS	5.3.8	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y				
DD 992	FLETCHER	CDS	Lvl 9+					USQ-124v4	Y	Y							
FFG 37	CROMMELIN	CDS	Lvl 12					USQ-125v4	Y	Y							
AOE 2	CAMDEN																
SSN 752	PASADENA	AN/BYQ-6	SEMPL 6.0	SJP			Y	USQ-76									
SSN 773	CHEYENNE	AN/BYQ-6	SEMPL 6.0	SJP			Y	USQ-76									
CVW - 14																	
VF-31	F-14D			JTIDS	ACR								Y				
VFA-25	F/A-18C												Y				
VFA-113	F/A-18C												Y				
VFA-115	F/A-18E												Y				
VAW-113	E-2C Group 2			JTIDS	ACR			TADIL A					Y				
VAQ-139	EA-6B Blk 89												Y				
VS-35	S-3B							TADIL A									
HS-4	SH-60F / HH-60H																
VRC-30	C-2A																
BELLEAU WOOD ARG																	
LHA 3	BELLEAU WOOD	ACDS	A10.24					USQ-125v1	Y	Y			Y				
LPD 9	DENVER	MLDS						USQ-125v1	Y	Y						E	
LSD 39	MOUNT VERNON																
LCAC																P	
15 MEU	GCE: BLT 3/1; MSSG-15; ACE: HMM-163															P	
MEF 02-2																	
DDG 76	HIGGINS	AWS	5.3.8	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y				
DDG 62	FITZGERALD	AWS	5.3.8	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y				
DDG 82	LASSEN	AWS	6A1.1.2	C2P	M5R4XX			USQ-120	Y								
COUNTER NARCOTICS JIATF EAST																	
FFG 41	MCCLUSKY	CDS	Lvl 7					USQ-74									
FFG 61	INGRAHAM	CDS	Lvl 13					USQ-74									

7.2 Appendix B – EMI Issues Status

Significant EMI issues for the LINCOLN – BELLEAU WOOD 02 BF are in tables below. In the tables, C indicates corrected, a X indicates funded, and a dollar sign indicates unfunded

PROB ID	SOURCE SYSTEM	VICTIM SYSTEM	CVN 72	AOE 2	CG 52	CG 67	DD 992	DDG 60	DDG 62	DDG 76	DDG 82	FFG 37	FFG 41	FFG 61	SSN 773	SSN 752	LHA 3	LPD 9	LSD 39
WARFARE AREA - ANTI AIR WARFARE																			
4-95	HF TRANSMISSIONS	AN/SPG-62			C	C													
14-81	AN/URN-25	AN/SPS-49(V)	C		C	C													
14-92	HF TX OR SPS-49/40	MK 15 CIWS BLK 1	C		C	C	C	C	C	C	X	C	C	C					
7-85	AN/SLQ-32(V)3/4	NSSMS MK 91	C	C															
6-79	HF TRANSMISSIONS	NSSMS MK 91	C																
3-92	NSSMS MK 91	NSSMS MK 91					C												
WARFARE AREA - COMMUNICATIONS WARFARE																			
42-86	SHIP POWER (60 HZ)	AN/BRA-34													X	X			
4-99	MK 23 TAS	AN/SRC-57 (DWTS)															X		
149-83	MK 92 MOD 2	AN/SSR-1										C	C	C					
27-96	UHF TRANSMISSIONS	AN/USQ-122(V)								X	X								
32-87	HF/HIGH PWR RADARS	AN/WSC-3(V) LOS	C																
60-81	AN/SPS-49(V)	AN/WSC-3(V)11	$																
20-94	AN/SPS-67	AN/WSC-6(V)															$		
28-96	AN/SPS-48E	AN/WSC-8(V)	X														$		
12-92	MK 23 TAS	INMARSAT	X	X			X										X		
36-93	AN/SPS-49(V)	INMARSAT	C		C	C						X		C					C
30-78	AN/SPS-40/49	IVCS PHONE TERMINALS			C	C											$		
WARFARE AREA - ANTI SUBMARINE WARFARE																			
23-80	HF TRANSMISSIONS	AN/SSQ-61/61A	C									C	C	C					
83-93	SHIPS POWER	TB-23														C			
130-83	AN/WLR-9	AN/WLR-9/12													X	C			

PROB ID	SOURCE SYSTEM	VICTIM SYSTEM	CVN 72	AOE 2	CG 52	CG 67	DD 992	DDG 60	DDG 62	DDG 76	DDG 82	FFG 37	FFG 41	FFG 61	SSN 773	SSN 752	LHA 3	LPD 9	LSD 39
WARFARE AREA - AVIATION																			
63-77	HF TRANSMISSIONS	OE-273/URN TACAN	C	C			C					C	C	C			C	C	
17-81	HF TRANSMISSIONS	SGSI					C					C	C	C				C	
WARFARE AREA - ELECTRONIC WARFARE																			
74-80	AN/SPS-48	AN/SLQ-32(V)															$		
62-84	AN/SPS-67	AN/SLQ-32(V)	T					X	X	X	X						$		
135-84	AN/SPY-1	AN/SLQ-32(V)			X	X		X	X	X	X								
237-82	AN/SPS-64	AN/SLQ-32(V)	T	$															
17-99	AN/SPS-73	AN/SLQ-32(V)																C	
5-88	MK 15 CIWS BLK 0	AN/SLQ-32(V)		$															$
3-95	AN/SPS-55	AN/SLQ-32(V)			X	X	X												
254-82	MK 92 CAS	AN/SLQ-32(V)										X	X	X					
41-96	"C-BAND" SATCOM	AN/SLQ-32(V)															$	$	
37-91	NSSMS AND DF BLANKING	AN/SLQ-32(V)1/2/3/4	$	$			X												
38-91	AN/SPG-62 AND DF BLANKING	AN/SLQ-32(V)2/3			X	X		X	X	X	X								
35-91	MK 92 CWI AND DF BLANKING	AN/SLQ-32(V)2/5										X	X	X					
20-92	AN/SLQ-32(V)4	AN/SLQ-32(V)4	C																
34-95	AN/SLQ-32A(V)3	AN/SLQ-32A(V)3			C	C													
50-93	LINK 16 (JTIDS)	AN/WLR-1H	C																
4-91	AN/SPS-49(V)	AN/WLR-1H	X																
24-89	SHIPBOARD EMITTERS	AN/WLR-1H	X																
26-76	CLASS B1 RADAR	EW EQUIPMENT	C	C	C	C	C	C	C	C		C	X	C			C	C	C

7.3 Appendix C - BGSIT Issue Information

The tables on the following pages provide information on relevant, open BGSIT items for this Battle Force. The data is current from Fleet BGSIT data, Fleet messages, and SYSCOM status messages. The LINCOLN 00 BGSIT was completed in February and the hot washup message is scheduled for release soon. SYSCOM response to the new BGSIT issues will be incorporated into the BRB assessment.

- The first table provides a list of OPEN issues in the Battle Force ships from the 1998 and 1999 BGSITs in which these ships participated.
- The second table provides status on open items from any 1998 or 1999 BGSIT for systems and interfaces (ACDS BLK O/AWS 5.3.6) similar to those being upgraded in LINCOLN 02. Confirmation of correction and closure of these issues is priority.

Earlier tables were provided to the PMs and PEOs via SEA 53 as part of the data call and status responses were requested. The responses need to be received and assessed enroute to, or during, the 02 Mar IBR.

LINCOLN 02 Battle Force Open BGSIT Items – Ships

HOTWASH PARA #	SYSCOM RESP.	SHIP NAME	ISSUE	CINC STATUS	SYSCOM REC STATU	IO Type	BFIMA NAME
5A	CNSP N43	USS BELLEAU WOOD	OTCIXS/TADIXS CONTROL HEADS LOCATION INAPPROPRIATE	OPEN	OPEN	Single Ship	99LHA3
5D	NAVSEA 05K23	USS BELLEAU WOOD	RADAR TO SLO-32 EMI	OPEN	OPEN	Single	99LHA3
5C	NAVSEA 05K23	USS BELLEAU WOOD	SPS-40 TO INMARSAT SAILOR PHONE EMI	OPEN-E	OPEN	Single	99LHA3
8D	NAVSEA 53H31	USS DENVER	FURUNO RADAR TO SLO-32 EMI	OPEN	OPEN	Single	99LHD6
8C	NAVSEA 53H31	USS DENVER	SPS-73 TO SLO-32 EMI	OPEN	OPEN	Single	99LHD6
5G	NAWCAD 4.5.8.2.2	USS BELLEAU WOOD	TPX-42 TO KCMX INTERFACE INOP	OPEN	OPEN	Single	99LHA3
5F	ONI JDISS	USS BELLEAU WOOD	JDISS OFF SHIP CONNECTIVITY INTERMITTENT	OPEN	OPEN	Multiple Ship	99LHA3
5H	PEOTSC PMS461	USS BELLEAU WOOD	ITAWDS PROGRAM DEGRADATION	OPEN	OPEN	Single	99LHA3
8C	PEOTSC PMS461	USS MCCLUSKY	CDS OJ-197 CONSOLE LOCK UP	OPEN-C	OPEN -	Single	98CVN7
10G	PEOTSC PMS461	USS INGRAHAM	CDS REPORTS UNKNOWN TRACKS OVER LINK-11	OPEN	OPEN	Multiple Ship	99CV64
10H	PEOTSC PMS461	USS INGRAHAM	CDS CANNOT MODIFY TRACK ID	OPEN	OPEN	Multiple	99CV64
10F	PEOTSC PMS461	USS INGRAHAM	CDS UNABLE TO CHANGE ID ON MUTUAL TRACK	OPEN	OPEN	Multiple Ship	99CV64
10E	PEOTSC PMS461	USS INGRAHAM	CDS DOES NOT DISPLAY CAP STATION	OPEN-C	OPEN-C	Multiple	99CV64
10D	PEOTSC PMS461	USS INGRAHAM	CDS INACTIVE PU CANNOT BE DROPPED	OPEN	OPEN	Multiple	99CV64
10I	PEOTSC PMS461	USS INGRAHAM	CDS DOES NOT CLEAR HOSTILE TRACK	OPEN	OPEN	Multiple	99CV64
10C	PMS400F (PEOTSC)	USS INGRAHAM	CDS TRAILING TRACK OR STREAM RAID NOT ACQUIRED	OPEN	OPEN	Multiple Ship	99CV64
10B	PMS400F (PEOTSC)	USS INGRAHAM	MK-92 FC-5 GENERATES SURF UNK SPD 1.5 MACH	OPEN	OPEN	Single Ship	99CV64
10A	PMS400F (PEOTSC)	USS INGRAHAM	MK-92 SCHEDULER INCORRECT	OPEN	OPEN	Single Ship	99CV64
5K	SPAWAR PMW157	USS BELLEAU WOOD	GCCS-M RED LINE DRAWINGS NOT PROVIDED	OPEN	CLOSED	Single Ship	99LHA3
5I	SPAWAR PMW157	USS BELLEAU WOOD	GCCS-M TRANSMITS DUPLICATE MESSAGES	OPEN	OPEN	Single Ship	99LHA3
5N	SPAWAR PMW157	USS BELLEAU WOOD	GCCS-M (SCI) ROUTER CONFIGURATION INCORRECT	OPEN	OPEN	Single Ship	99LHA3

LINCOLN 02 Battle Force Open BGSIT Items – Systems

HOTWASH PARA #	SYSCOM RESP.	SHIP NAME	ISSUE	CINC STATUS	SYSCOM REC STATUS	IO Type	BFIMA NAME
6E	PEOTSC	USS ENTERPRISE	ACDS ILLEGAL DOWNGRADING OF ID	OPEN	OPEN	Multiple Ship	98CVN65
15Z	PEOTSC	USS THEODORE ROOSEVELT	C2P CONTINUES TO XMIT TRACK ON LINK-16	OPEN	OPEN	Multiple Ship	98CVN71
16H	PEOTSC	USS THORN	CDS PROGRAM INCORRECT REPORTING	OPEN	OPEN	Multiple Ship	98CVN65
9H	PEOTSC PMS461	USS OLDENDORF	CDS LINK-11 PU'S NOT GOING TROUBLE	OPEN	OPEN	Multiple Ship	98CVN70
10G	PEOTSC PMS461	USS INGRAHAM	CDS REPORTS UNKNOWN TRACKS OVER LINK-11	OPEN	OPEN	Multiple Ship	99CV64
10I	PEOTSC PMS461	USS INGRAHAM	CDS DOES NOT CLEAR HOSTILE TRACK	OPEN	OPEN	Multiple Ship	99CV64
10H	PEOTSC PMS461	USS INGRAHAM	CDS CANNOT MODIFY TRACK ID	OPEN	OPEN	Multiple Ship	99CV64
10F	PEOTSC PMS461	USS INGRAHAM	CDS UNABLE TO CHANGE ID ON MUTUAL TRACK	OPEN	OPEN	Multiple Ship	99CV64
10D	PEOTSC PMS461	USS INGRAHAM	CDS INACTIVE PU CANNOT BE DROPPED	OPEN	OPEN	Multiple Ship	99CV64
15F	PEOTSC PMS461E4	USS LAKE CHAMPLAIN	CND ASSIGNED NEW STN ON REPOSITION	OPEN	OPEN	Multiple Ship	99CVN74
7H	PMS400	USS GETTYSBURG	CND ILLEGAL ID CHANGE	OPEN-E	OPEN-E	Multiple Ship	98CVN65
15F	PMS400	USS STOUT	CND ID01 CRO CLEARS WHEN PU HOOKED	OPEN	OPEN	Multiple Ship	98CVN65
15J	PMS400	USS STOUT	CND DISPLAY INACCURATE	OPEN-E	OPEN-E	Multiple Ship	98CVN65
15M	PMS400	USS STOUT	CND TRACK DISPLAY ERROR	OPEN	OPEN-E	Multiple Ship	98CVN65
15P	PMS400	USS STOUT	CND CHANGES REALTIME TRACK TO NON-REALTIME	OPEN-E	OPEN-E	Multiple Ship	98CVN65
15R	PMS400	USS STOUT	CND DISPLAYS LINK-16 CHANNEL STATUS INCORRECTLY	OPEN	OPEN	Multiple Ship	98CVN65
15T	PMS400	USS STOUT	CND LINK SIF CONFLICT WITH NO LOCAL DATA	OPEN-E	OPEN-E	Multiple Ship	98CVN65

LINCOLN 02 Battle Force Open BGSIT Items – Systems (cont'd)

HOTWASH PARA #	SYSCOM RESP.	SHIP NAME	ISSUE	CINC STATUS	SYSCOM REC STATUS	IO Type	BFIMA NAME
6D	PMS400 (PEOTSC)	USS CHOSIN	CND GENERATING EXCESSIVE LAND FRND TRACKS	OPEN-E	OPEN-E	Multiple Ship	99CV64
6B	PMS400 (PEOTSC)	USS CHOSIN	CND DOES NOT DISPLAY PENDING SIF DATA	OPEN-E	OPEN-E	Multiple Ship	99CV64
6G	PMS400 (PEOTSC)	USS CHOSIN	C2P PU176 JUMPS WHEN PADS ARE APPLIED	OPEN-E	OPEN-E	Multiple Ship	99CV64
12V	PMS400 (PEOTSC)	USS LAKE ERIE	CND SHOWS NO FUEL STATE FOR LINK-16 ACFT	OPEN-E	OPEN-E	Multiple Ship	99CV64
12R	PMS400 (PEOTSC)	USS LAKE ERIE	CND REAL TIME TRACK DE-CORRELATES TO NRT	OPEN-E	OPEN-E	Multiple Ship	99CV64
12P	PMS400 (PEOTSC)	USS LAKE ERIE	CND UNABLE TO DELETE EMERGENCY STATUS	OPEN-E	OPEN-E	Multiple Ship	99CV64
12L	PMS400 (PEOTSC)	USS LAKE ERIE	CND ALERTS WITH SAME MODE 2	OPEN-E	CLOSED	Multiple Ship	99CV64
12G	PMS400 (PEOTSC)	USS LAKE ERIE	CND ID CONFLICTS GENERATED DUE TO AUTO CORRELATION	OPEN-E	OPEN-E	Multiple Ship	99CV64
12E	PMS400 (PEOTSC)	USS LAKE ERIE	CND ACCEPT/REJECT LINK SIF CONFLICT	OPEN-E	OPEN-E	Multiple Ship	99CV64
11H	PMS400	USS PRINCETON	CND ID AMP NOT ALWAYS XMITTED WHEN NON-R2	OPEN-E	OPEN-E	Multiple Ship	98CVN70
15H	PMS400B3C	USS LAKE CHAMPLAIN	CND MODEL 5 UNITS DISPLAYED AS FRIEND LINE NO STATEMENT	OPEN	OPEN-E	Multiple Ship	99CVN74
12D	PMS400B3C	USS LAKE ERIE	CND DISPLAYING TRACKS WITH TQ(EQUAL SIGN)0	OPEN	OPEN	Multiple Ship	99CV64
12Y	PMS400B3C	USS LAKE ERIE	C2P STN ASSIGNMENT AND CND R2 ANOMALY	OPEN-E	OPEN-E	Multiple Ship	99CV64
12I	PMS400B3C	USS LAKE ERIE	SGS/AC CONTROLLED CORRELATION CEASES	OPEN	OPEN	Multiple Ship	99CV64
12K	PMS400B3C	USS LAKE ERIE	CND UPLINK ORDERS CONTINUE AFTER BREAK ENGAGE	OPEN	OPEN	Multiple Ship	99CV64
12N	PMS400B3C	USS LAKE ERIE	SGS CONSTANT LOST COMM AND CHANNEL CHANGE ALERTS	OPEN	OPEN	Multiple Ship	99CV64
12S	PMS400B3C	USS LAKE ERIE	CND INCORRECTLY PROCESSED SPEED ENTRY	OPEN	OPEN-E	Multiple Ship	99CV64
12U	PMS400B3C	USS LAKE ERIE	CND/C2P TRANSMIT FILTER STATUS TOGGLING	OPEN-E	OPEN	Multiple Ship	99CV64

LINCOLN 02 Battle Force Open BGSIT Items – Systems (cont'd)

HOTWASH PARA #	SYSCOM RESP.	SHIP NAME	ISSUE	CINC STATUS	SYSCOM REC STATUS	IO Type	BFIMA NAME
12H	PMS400B3C	USS LAKE ERIE	SGS/AC NOT COMPUTING GRIDLOCK PADS	OPEN	OPEN	Multiple Ship	99CV64
17H	PMS400B3C	USS PORT ROYAL	CND PRESENTED SIF CONFLICT WITH SAME DATA	OPEN-E	OPEN-E	Multiple Ship	99CVN74
17N	PMS400B3C	USS PORT ROYAL	SGS GRIDLOCK PADS NOT CALCULATED	OPEN	OPEN-E	Multiple Ship	99CVN74
19J	PMS400B3C	USS RUSSELL	CND DISPLAYS SPECIAL POINTS WITH ERRONEOUS SPEED	OPEN	OPEN-E	Multiple Ship	99CVN74
19L	PMS400B3C	USS RUSSELL	CND DISPLAYS INVALID R2 UNIT	OPEN	OPEN-E	Multiple Ship	99CVN74
19N	PMS400B3C	USS RUSSELL	CND DOES NOT DISPLAY CURRENT SIF DATA	OPEN-E	OPEN-E	Multiple Ship	99CVN74
19O	PMS400B3C	USS RUSSELL	CND GENERATES FALSE ID CONFLICT ALERTS	OPEN-E	OPEN-E	Multiple Ship	99CVN74
19Q	PMS400B3C	USS RUSSELL	CND LOSES OWNSHIP IU NUMBER	OPEN	OPEN-E	Multiple Ship	99CVN74
19R	PMS400B3C	USS RUSSELL	CND UNABLE TO DELETE EMERGENCY STATUS	OPEN-E	OPEN-E	Multiple Ship	99CVN74
19U	PMS400B3C	USS RUSSELL	CND DISPLAYS INVALID ORIG TN FOR FORCE ORDER	OPEN	OPEN-E	Multiple Ship	99CVN74
19P	PMS400B3C	USS RUSSELL	CND GENERATES ALERT WHEN MODE 2 IS THE SAME	OPEN-E	OPEN-E	Multiple Ship	99CVN74
4C	PMS400B3C	USS CARL VINSON BG	CND DISPLAYS XF STATUS FOR LINK ELIGIBLE TRKS	OPEN-E	OPEN-E	Multiple Ship	98CVN70
11G	PMS400B3C	USS PRINCETON	CND DISPLAYS INVALID ID CONFLICT	OPEN-E	OPEN-E	Multiple Ship	98CVN70
10C	PMS400F (PEOTSC)	USS INGRAHAM	CDS TRAILING TRACK OR STREAM RAID NOT ACQUIRED	OPEN	OPEN	Multiple Ship	99CV64
12X	PMW159	USS LAKE ERIE	LINK OP MODE TOGGLING AT CND	OPEN-E	OPEN-E	Multiple Ship	99CV64
5I	SPAWAR PMW157	USS BELLEAU WOOD	GCCS-M TRANSMITS DUPLICATE MESSAGES	OPEN	OPEN	Multiple Ship	99LHA3
5J	SPAWAR PMW157	USS BENFOLD	GCCS-M TRACK DATABASE NOT UPDATING	OPEN	OPEN	Multiple Ship	99CV64
13A	SPAWAR PMW159	USS JOHN PAUL JONES	C2P HULL ID INCORRECT AFTER A COLD LOAD	OPEN-E	OPEN-E	Multiple Ship	99CVN74
15A	SPAWAR PMW159	USS LAKE CHAMPLAIN	C2P BACKGROUND LOAD OCCURS FREQUENTLY	OPEN-E	OPEN-E	Multiple Ship	99CVN74
17G1	SPAWAR PMW159	USS PORT ROYAL	CND GENERATING ERRONEOUS TRACKS	OPEN	OPEN	Multiple Ship	99CVN74

7.4 Appendix D - Issue Papers (Full Text)

This appendix provides full text of the issues highlighted and summarized in the main document. These issues were provided to PEOs and PMs as part of data call. Responses will be compiled and assessed as enroute to the 02 March IBR.

BF Issue #	***Issue Title***
001	Lack of Dual Net Link 11 Capability
002	Data Registration/Gridlock Problems
003	ID Conflict Resolution – Change Data Orders
004	Space Track Implementation
005	Degraded Position Location Information
006	Air Control Interoperability Problems
008	Intra-ARG Connectivity
010	ACDS MODE 2 De-correlation
011	Numerous, Minor ACDS BLK 0 LVL 10 Problems

Legend for Issue Papers

I = Interoperability Category I – Systems whose operation is vital to Battle Force interoperability or warfare mission accomplishment**.**

II = Systems that support Battle Force missions or standalone systems.

III = Systems that do not meet CAT I or II criteria.

Both Category I and II systems are subject to System Certification and to Battle Force level configuration management. Category I systems are tested in the Distributed Engineering Plant DEP as are the interfaces of Category II systems with Category I systems. Category III systems are subject to TCD compliance and platform level configuration management.

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BF – 001 Issue: Lack of Dual Net Link 11 Capability

Background:

Dual Net refers to operating simultaneously on two Link 11 (TADIL-A) nets. Dual nets are needed when a single network does not support the information exchange requirements of all participants. For example, Air Warfare normally requires a Link 11 network with low Net Cycle Time (NCT) and mutual tracking for area defense. Many joint operations, on the other hand, focus on Intelligence and Warning (I&W) support for ground forces. Here, the Link 11 network may be configured with airborne platforms, such as AWACS, providing maximum surveillance coverage using Track Production Areas (TPAs, the antithesis of mutual tracking). In such I&W nets, NCT is of little concern and, in actual operations, often exceeds 30 seconds. One combined TADIL network cannot support both objectives. All major Theater Net architectures (JTF/SWA, Korean, and recently, the Adriatic) incorporate Dual Link 11 nets. Participating in such an architecture without Dual Net capability would be difficult (see ROOSEVELT Lessons Learned, TRBATGRU 221330Z JUN 99). For FDNF 01 all AEGIS ships except VINCENNES will be Model 5 (AWS B/L 5.3.7 or 3A.0.9). Currently, there is only an experimental Model 5 DNMFL processor.

Discussion:

There are three classes of action that can address this issue:

1. Purely Technical: PMW-159 perfects and builds a Model 5 Dual Net system.
2. Technical/Tactical: Satellite TADIL-J is full up and replaces the secondary TADIL-A net.
3. Purely Tactical: work arounds – this requires that tactical development agencies (e.g., SWDG/TACTRAGRU/JTAMDO) develop tactics allowing a BG with only one DNMFL to operate effectively in theater.

Technical Solution – Develop Model 5 DNMFL: Understanding that a working engineering model of a Model 5 Dual Net system has already been developed and is scheduled for tests starting in summer 00 as part of C2P Rehost, risks associated with this solution path are able to be estimated. In addition, accurate estimates of cost and schedule should be available. Investigating this solution requires SEA53 to task PMW-159 to assess this solution path including estimates on funding profile, testing schedule, test result availability, training and DEP plans.

Technical/Tactical Solution – S-TADIL-J: A Satellite TADIL-J network operates much more like a Link 11 net than like a Link 16 net. Because of up-and-back satellite transit time, it does not run as a time division network – it operates as a token ring and has associated a distinct Net Cycle Time that can be long. The actual message structure is the richer TADIL-J language.

Three questions need to be answered. First, will S-TADIL-J be up and ready both within the Battle Group and aboard the Joint players who would normally play on the secondary Link 11 nets of the current Joint architectures? If the answer to the first is yes, is it likely that the substitution of Satellite TADIL-J for secondary Link 11 will be accepted by Joint commands?

Lastly, will coalition deployers continue to be supported by TADIL A/TADIL J/S-TADIL-J architecture?

To investigate this solution path requires that PMW-159 be tasked to analyze (as above for the Model5 Dual Net) the probability that Satellite TADIL-J will successfully deploy with the LIN02 Battle Group. Also, Other military services must be polled to establish the likelihood that players currently participating on the secondary Link 11 nets will be capable of moving to a Satellite TADIL-J net. Joint commands and commands developing Joint tactics must be polled to determine whether they see Dual Net Link 11 being phased out and, perhaps replaced with S-TADIL-J connecting Link 16 networks.

Tactical Solution – work arounds: This solution depends upon finding a tactically acceptable work around for active participation on both primary and secondary Link 11 nets. Because Battle Groups currently deploy without DNMFL capability, this is clearly possible. However, Joint operations are becoming more network-centric as time passes. The ROOSEVELT BG commented on what they considered the necessity of DNMFL during recent Adriatic operations. Technical aids exist to help the situation and can provide separate Link pictures aboard a single platform. But these do not afford automatic forwarding of data to, from and across the two Link 11 nets and the Link 16 net. Further investigation of this solution path would require participation of the Tactical Development agencies.

Recommendations:

PMW-159 be tasked to assess the development of Model 5 DNMFL solution and present detailed estimates as discussed above.

If Option 1 (Technical) is a viable solution, recommend a series of evaluation milestones be established to ensure timely readiness of specifications for technical analysis, documentation for classroom training, and system for DEP, and all is ready for at-sea training. This will allow back-up solutions time to be developed and implemented if critical milestones are missed.

Actively maintain a solution path centered on tactical work-arounds to keep a fall back position. Task one or more Tactical Development agency to assess how the Battle Group might operate, without DNMFL, in the 01 time frame in the major theaters. Publish the results of these studies as TTPs and push to training commands so curricula can be developed. Subsequently, as the TTPs are validated in operations, feedback to training must be ensured.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: Yes
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR (No) NAVSEA (SEA 53)SPAWAR (PMW 159) MARCORP (No) JOINT (yes)
POC: TBD
Applicable Battle Forces: All
Applicable sponsor codes: OPNAV N86, N6
Information Requested from SYSCOM (SPAWAR PMW 159)
-POA&M
-Funding Risk
-Schedule Risk

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BF – 002 Issue: Data Registration/Gridlock Problems

Data Registration and Gridlock remains problematic, particularly in the Joint environment. This will remain true until all units perform Link 16 data registration. Within the Multi-TADIL BG itself, Data Registration will be as problematic as in past BGs until this issue is addressed in Model 5 programs at a minimum

Background:

Data Registration is the process of aligning coordinate systems so that all units participating in a TADIL have a common reference frame. TADIL-A and TADIL-J (Links 11 and 16) use very different Data Registration methods. To date, only the Group 2 E2C and ACDS Blk 1 include Data Registration in their specifications to perform true TADIL-J data. Note that data registration is not tested as part of NCTSI (or JTIC) Link certification testing.

Discussion:

While bringing Navy units into compliance with TADIL-J standards should help some Joint data registration problems, it is not clear that such action alone will solve the entire problem.

Recommendations:

Conduct training, including complete technical discussions in the Caps & Lims publication, and address via tactical discussions led by the tactical community in their documentation and training.

SEA53 continue efforts to persuade programs to fully implement a common Data Registration methodology and, to this end, task programs to supply their plans to address the problem. However, this is a long-term problem, not a single Battle Group issue.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: Yes
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR (No) NAVSEA (Yes) SPAWAR (Yes) MARCORP (No) JOINT (Yes)
POC: SEA 53
Applicable Battle Forces: All
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I)
Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

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BF – 003 Issue: ID Conflict Resolution – Change Data Orders

Not all units in a Battle Group correctly respond to ID changes. This leads to almost continuous ID conflicts across the force which confuse the picture burdening the operators. Frequently, those in tactical command may be completely unaware that the ID of a given track is in dispute. A unit may be transmitting one ID while showing, internally, another ID all according to specification.

Background:

Because different Combat Systems were designed to meet different generations of TADIL operating specifications, their computer programs employ different methods of attempting to resolve ID Conflicts on the TADILs. This is one important cause of the conflict cascades that can cause operator alerts throughout the TADIL.

The Links provide two methods of changing ID:

1. ID Difference Reports transmit a message requesting an ID to which the system would like the ID changed.
2. Change Data Orders (ID Force Orders) transmit a message ordering an ID change immediately.

Neither change method is correctly (or consistently) implemented across the force.

When a unit receives an ID Difference message it can do one of three things:

1. Automatically accept the ID change (Accept)
2. Automatically reject the change (Reject)
3. Alert the operator asking whether to accept or reject (Conflict)

Which course should be taken for a given proposed ID change (Accept, Reject or Conflict) is specified in the Link OPSPEC and governed by the ID Conflict Matrix? The OPSEC also spells out, if the result calls for Conflict, what should happen during the time the operator is deciding whether to accept or reject the ID change.

As the OPSPECs have evolved, different units now implement ID changes differently. A unit can make a change, which is completely legal within its system, only to trigger Conflict on the link, or have the request summarily rejected by some units.

While all OPSPECs require that, during a Conflict, the unit with Reporting Responsibility (R2) transmit its current ID, the ID shown internally on that unit, many units fail to do this. These units transmit the proposed ID (which may or may not be accepted by the operator) while showing, internally on its displays, the old ID. Among units that do this are the E2C, AEGIS Baseline 5.C & 1.4, all ACDS units, all FFGs and all SPRUANCE class destroyers and AWACS).

In the case of ACR Link 16 controlled aircraft (F-14D or F-15) this can lead to the controlling unit seeing an ID different than that seen by the fighter pilot. Note, also, how this compounds the Conflict leading to a cascade of ID arguments between computers and operators across the net. One unit suggests an incorrect ID change. Assuming that change is not originating on the unit with R^2, other will units ignore the Difference message. However, now assume the R^2 unit conflicts. It may start transmitting the incorrect ID while showing the current ID internally while the operator

decides to accept or reject. Now, this transmission is coming from R2, so all units evaluate and, very possibly, cause all to conflict.

There is a protocol common to all TADIL specs that could provide a work-around. All combat systems, by Link Spec, should respond to a Change Data Order (CDO), or Force ID Order, by changing, without question, the ID of a given track to a value specified in the order. There are some exceptions, such as unit's inability to change ownship-controlled aircraft's ID. This Change Data Order should provide Force Track Coordinator (FTC) with a single button action method of forcing ID changes.

Unfortunately, anomalies in computer programs currently prevent some systems from responding to CDOs. The following systems have problems under various circumstances: all FFGs, all SPRUANCE destroyers, all Model 4 AEGIS with C2P (C2P/C&D interaction), ACDS Blk 1.

Also, some units are unable to issue CDOs. Neither FFGs nor SPRUANCE destroyers can issue CDOs. However, since these units are unlikely to serve as FTC, this is not of great consequence. What is of consequence is that some E2Cs cannot issue CDOs and, in the Joint arena, neither PATRIOT nor Rivet Joint can issue CDOs. There is an AEGIS 5.3.7 CDO anomaly, which prevents CDOs on Space Tracks.

Discussion:

As a matter of some urgency, no unit should transmit one ID while holding a different ID internally. However, fixing the more fundamental problems causing ID Conflict cascades will take some time and considerable resources. As an interim step, FTC's job can be eased if all programs fix the systems under their cognizance to correctly respond to Change Data Orders. Both TADIL-A and J incorporate such orders and the response should be the same on either link. Units scheduled to operate in or with LIN02 Battle Group require attention. For example, CDS Level 13 FFGs (THACH) have been observed to disregard Force ID orders in that the displayed ID changes but the old ID is still reported on the link. In the DD 963 class, the CDS program fails to accept Force ID Orders if the track in question is already involved in an ID conflict – a situation where, presumably, one most wants the Force Order to take effect.

The solutions remain:

Technical: fix the computer programs

Tactical: continue to work around by not authorizing ID downgrades or changes to HOSTILE except via CDOs and restricting CDO use to FTC (or any capable unit to prevent blue-on-blue) – coordinating by voice.

Recommendations:

1. At a minimum, all units must be made to correctly respond to CDOs/ID Force
2. Orders. In particular the program bugs in the FFG and SPRUANCE combat systems should be fixed
3. As a matter of some urgency, modify all computer programs in such a manner as to insure that during ID conflict they transmit the CURRENT ID not the PROPOSED ID. This requires modifying all E2C, ACDS Blk 0&1, FFG, SPRUANCE, AEGIS 5.C, AEGIS 1.4.
4. Ensure that all combat systems implement the Joint ID Conflict matrix as per OPSPEC 411.3/516.1 (or the governing joint mil spec 6016). This will require mods to ACDS Blk 0, FFG, SPRUANCE, AEGIS BL 1&2, E2C Grp 0&2)
5. If this is a viable solution, recommend a series of evaluation milestones be established to ensure timely readiness of specifications for technical analysis, documentation for classroom

training, and system for DEP, and all is ready for at-sea training. This will allow back-up solutions time to be developed and implemented if critical milestones are missed.

6. Actively maintain Caps and Lims solution as a fall back position if technical solution falls off schedule but recognize that the workarounds for the basic lack of consistent ID processing really require that CDOs be processed correctly.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: Yes
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR (No) NAVSEA (Yes)SPAWAR (Yes)
POC: SEA 53
Applicable Battle Forces: ALL
Applicable sponsor codes: OPNAV N86, N6
Information to be requested from PM:
-POA&M
-Funding Risk
-Schedule Risk

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1/4/00

BF – 004 Issue: Space Track Implementation

While all AEGIS ships can track Space Objects and a few Linebacker units can truly plan surveillance and respond to cueing, very few non-AEGIS units can process Link Space Track messages.

Background:

Both the Link 11 and 16 specifications have recently been modified to accommodate Space Tracks. New messages were needed in order to accommodate the high speed and altitudes involved, as the older Air Track messages do not have the bit field length required to carry this data. Also, associated with Space Tracks are new special points, such as Launch and Impact points, which don't exist in the older link structure. When a unit not designed to process Space Tracks receives same, it simply discards the message(s).

Discussion:

While current Battle Groups have the ability to track Space Tracks. None can process this data across the TADILs, process the track itself, nor process the launch and crater points. However, GCCS-M units can see the data, time late. In particular the Carrier cannot see the TADIL Space Track picture since neither ACDS Blk 0 or 1 processes Space Tracks.

There is a, not too satisfactory, work-around for ACDS Blk 0 units. If such units are equipped Dual Net/Multi-Freq Link (DN/MFL), the DN/MFL can be set up to translate Space Tracks and Launch/Impact points into Air Tracks and Special points. This is not completely satisfactory because, in the translation, altitude and speed must be truncated. So, position is good at the time the track was transmitted but the combat system will not coast the very fast track accurately.

Recommendations:

1. Ensure that Model 4 Carriers deploy with DN/MFL.
2. Assess the need to so equip the large deck Amphibs.
3. Provide, at the least, minimal space track capability in ACDS Blk 0, such as proper display and coast.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: Yes
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR (No) NAVSEA (Yes)SPAWAR (Yes)
POC: TBD
Applicable Battle Forces: All
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I)
Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

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BF – 005 Issue: Degraded Position Location Information

Background:

USN will deploy PLRS for this BF. USMC will have upgraded to EPLRS by this time. USN upgrade to EPLRS is not totally funded.

Discussion:

While PLRS and EPLRS are minimally compatible, the insertion of any PLRS units into an EPLRS network brings network performance down to the lowest common denominator. Unless the USN assets are upgraded to EPLRS, the use of KSQ-1 Amphibious Assault Direction System or PLRS itself will destroy the ability of the MEU to communicate and share data. This will force the USN ARG off the command and control network denying the use of the LHD as command center. Without the LHD in the command network, Operational Maneuver From The Sea (OMFTS) is not possible.

Recommendations:

Accelerate EPLRS.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: Yes
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR (No) NAVSEA (Yes)SPAWAR (Yes) MARCORP (Yes) JOINT (Yes)
POC: PMS 377
Applicable Battle Forces: all after mid-01 except BONHOMME RICHARD ARGs.
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I) – N85
Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

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BF – 006 Issue: Air Control Interoperability Problems

The introduction of Air Control Revision (ACR) software on Link 16 capable aircraft will cause interoperability problems with other units in the fleet outfitted with incompatible configurations.

Background:

The Surface Navy intended to provide full Link-16 capability by fielding Model 5 (M5) C2P along with ACDS Block I on all AAW capable platforms, as compared to the partial capability provided by Model 4 (M4). M4 is an intermediate step from Link-11 to Link-16 capability. Naval Air transition to full Link-16 capability, known as Air Control Revision (ACR), was to be implemented coincident with M5 in the Surface Navy. The Surface Navy and NAVAIR implementation schedules have been delayed, raising concern over the potential to deploy Aircraft and Surface Ships with incompatible Link architectures. PHD NSWC convened a meeting on 14 May 1999 with NAVAIR and fleet representatives to discuss the issue.

Discussion:

The F-14D will be the first to receive ACR, scheduled for March of 2000. The E-2C will receive ACR in June of 2000. F/A-18 C/D and E/F will receive ACR in 2003. The LINCOLN/TARAWA Battle Force deploying in August 00 will be the first to be impacted by ACR. The Battle Group will contain a mix of M5 and M4 ships, and both ACR and non-ACR aircraft. The M4 ships will not be able to communicate with the ACR aircraft on link 16. In addition the non-ACR aircraft will have a choice of selecting either Link 4A (fighter to ship) or Link 4C (fighter to fighter). They cannot have both simultaneously. Those impacts have been assumed to be tolerable during the transition period; however they will impact operations with the US Air Force, the US Army, and allies.

NCTSI certifications are testing to the OPSPEC that includes ACR. M4 configured ships (non ACR-capable) will fail certification. The development of ACR took into account impacts to non-ACR platforms. The E-2C Software Support Activity plans to conduct compatibility testing with M4 and M5 ships, but testing has not yet been formally scheduled.

As an interim work-around, a secondary Air Intercept Control (AIC) capability will be maintained using Link 4. However, Link 16 provides significant enhancement over the capability of Link-4. The issue then becomes a question of gains for naval aircraft communication with Joint Forces versus communication with organic BG assets. Also, there is speculation over how ACR will really interact with M4 and M5 C2P, as it has not completed operational T&E or NCTSI certification.

Recommendations:

1. Complete T&E on all potential platform mix combinations. Use the Lincoln BG Distributed Engineering Plant (DEP) to evaluate the actual effect of ACR on M4 and M5 ships. Lincoln BF DEP is currently scheduled to begin 6 Dec 99, and complete 31 Dec 99. ACTION: NAVAIR 4.0 and NAVSEA 05D.
2. Certify ACR at NCTSI. ACTION: NAVAIR 4.0T

3. Maximize the use of M5 AEGIS combatants as AAW Commander until M5 can deploy on the CV/CVNs. ACTION: BG Commander.

4. Provide difference training in support of the inter-deployment training cycle and discuss the issue in BF Caps and Lims for all affected Battle Forces. ACTION: PHD NSWC.

5. Determine applicability of this problem to all future Battle Groups. ACTION: PHD NSWC.

Problem Resolution

Interoperability Category of this issue: I
NCTSI (Link Certification) Consideration: Yes
Unique Distributed Engineering Plant consideration: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR NAVSEA SPAWAR MARCORP JOINT
Applicable Battle Forces: LINCOLN 00 others-TBD
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I)
Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

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BF – 008 Issue: Intra-ARG Connectivity

Background:

Operational need for Intra-ARG VTC capability was established by CINCPACFLT 202028Z Apr 99, CINCLANTFLT 232337Z Apr 99 and OPNAV 0520208Z May 99. Requirement for Digital Wideband Transmission System (DWTS) to support voice, video and data has been and continues to be an operational requirement for ARG/MEU to support the Rapid Response Planning Process (R2P2). CINCPACFLT requested OPNAV to include VTC capability for not only the large deck AMPHIB, but also for the LPD and LSD within the ARG.

Discussion:

OPNAV, in conjunction with COMSPAWARSYSCOM, is assessing technical and system options available to fulfill the request within available funding constraints for installations required for FY-00 and 01.

Another option available to meet the Intra-ARG VTC requirement is the UHF MDR system. This is a non-program of record that has been employed by COMPHIBGRU 3 on two ARGs to date to meet this requirement.

Installation of these systems allows for high bandwidth data transfer using Line-of Sight (LOS) resources. This benefits the entire BF by freeing satellite resources.

Recommendations:

1. Fund and install DWTS in all three ships of the ARG.
2. If systems or funds are not available to support, then cross deck UHF MDR in the interim.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: No
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: SPAWAR (Yes) NAVSEA (No) MARCORP (Yes) JOINT (No)
POC: PMW 158
Applicable Battle Forces: All ARGs
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I) N85
Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

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BF – 010 Issue: ACDS MODE 2 De-correlation

Background:

The Advanced Combat Direction System, both BLK 0 and BLK 1 baselines perform an automatic de-correlation of Mode 2 IFF tracks resulting, because of chronically poor IFF/Radar association, in the generation of multiple dual track situations. This has been seen repeatedly in DEP testing and at sea.

Discussion:

The ACDS programs are operating in accordance with their design specs. The requirement is not in the OPTASK spec, which recommends manual de-correlation. Therefore, this issue may be corrected without impact to the OPSPEC.

Recommendations:

1. Modify the ACDS programs via the ECP process to make the mode 2 process a manual operator action.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: No
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVAIR (No) NAVSEA (Yes) SPAWAR (No) JOINT (No)
POC: Yue Fei Wu PMS 461
Applicable Battle Forces: All
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I)
Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

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20 August 1999

BF- 011 Issue: Numerous, Minor ACDS BLK 0 LVL 10.24 Problems

Background:

ACDS BLK 0 LVL 10 has several known issues that are minor separately, but severe in culmination.

Discussion:

The following issues have been seen:

Ownship Picket, NCS Stops and Restarts Resulting in Failure to Display Track Information. When ownship is a picket and NCS stops transmitting on Link 11 and then starts transmitting again, the program may fail to display track information during the first 2 minutes. Track data was observed to be transmitted during this time.

WORK AROUND: None.

Failure to Forward Track Data for Up to 7 Minutes. When a track is dropped and another unit assumes RR for it, the CDS fails to forward track data for periods up to 7 minutes.

WORK AROUND: None.

Ceases Reporting Track then Transmits New Identity at Same Position. When the ship ceased reporting a track, it then transmitted another track with a different identity at the position of the track which it ceased reporting. WORK AROUND: None.

Link 11 PU Indirect PPLI Data Forwarded. Link 11 PU indirect PPLI data was forwarded to Link 16 (TADIL-J) on NPG 14 vice NPG 6. WORK AROUND: None.

Track Numbers for Special Points are neither maintained nor processed. This results in an identical track number for two different tracks. WORK AROUND: None.

UNK-PEND-SURF Displayed as AIR-FRND-GEN. An UNKNOWN-PENDING Surface Track was reported on Link 11 and Link 16, but it was displayed as Air FRIEND-GENERAL.

WORK AROUND: None.

When RR Changes, Mode 3 Non-RR Transmits IFF Diff Reports. As a non-RR unit, the ship continuously transmitted IFF Difference reports and IFF/SIF messages when the RR unit changed Mode 3. The operator was not notified of the IFF conflict. WORK AROUND: None.

Incorrect Data Forwarded to Link 16. Upon receipt of an illegal Mode 1 value, incorrect data was forwarded to Link 16. WORK AROUND: None.

Improper Response to IFF Clear Data Request. The system failed to clear Mode 1 when Mode 1 Clear was received. Instead, Mode 1 was cleared when Mode 3 Clear was received.

WORK AROUND: None.

Non-RR Unit Transmits IFF Diff when Mode 2 Clear Received. As a non-RR unit, the ship transmitted an IFF Difference report and IFF/SIF report when a Mode 2 Clear was received. The same occurred for Mode 4. WORK AROUND: None.

Mode 4 Reported as Valid. Mode 4 was reported as valid without operator entry.

WORK AROUND: None.

Spurious Transmission of Special Code. Special Code was spuriously transmitted after transmitting Clear Special Code. WORK AROUND: None.

Responded with Two Diff IFF/SIF Messages. As a non-RR unit, the ship responded with two different IFF/SIF messages reporting different Mode 3 values when an IFF Difference report was received from another non-RR unit. WORK AROUND: None.

Paired and Engaged Handovers not Processed. Paired and engaged handovers were not processed nor displayed when TN2 was not held. WORK AROUND: None.

Does not Respond to Handover with CANTPRO. When the track is not held, the system does not respond with a CANTPRO. WORK AROUND: None.

Unable to Transmit a Command Message with Weapon Type of Aircraft. The ship was unable to transmit a Command Message (M.15) with Weapon Type equal to Aircraft. WORK AROUND: None.

Recommendations:

1. Review priorities with PARM to ensure issues addressed in future revisions of ACDS.

Problem Resolution

Interoperability Category of this issue: I
NCTSI Consideration: Yes
Distributed Engineering Plant applicability: Yes
Capabilities/Limitations Document applicability: Yes
SYSCOM(s) applicability: NAVSEA (Yes)SPAWAR (No) JOINT (No)
POC: Yue Fei Wu PMS 461
Applicable Battle Forces: All
Applicable sponsor codes: OPNAV N86, N6 (includes HQ USMC C4I) Information Requested from SYSCOM:
-POA&M
-Funding Risk
-Schedule Risk

JOHN C. STENNIS BATTLE FORCE 2002
BASELINE REVIEW BOARD (BRB)
ASSESSMENT

Prepared by
PHD NSWC Code 4L31
Battle Force Action Office
09 March 2000

TABLE OF CONTENTS

1.0 PURPOSE

This is an update of the Initial Baseline Review (IBR) assessment dated 23 September 1999. This assessment is in support of the Baseline Review Board (BRB) decision-making process and is being provided for the D-24 BRB meeting planned for 15 March 2000. This assessment provides an update on significant new capabilities and on Battle Force and system issues including recommendations for long-term action and the BRB.

2.0 EXECUTIVE SUMMARY

CINCPACFLT message DTG 061708Z JUL 99 established the Target Configuration Date (TCD) of 15 July 2001, the deployment date of 15 Jan 2002 and composition for JOHN C STENNIS 2002 (JCS 02) BF. USS OGDEN (LPD 5) and USS ELLIOT (DD 967) are scheduled for decommissioning and require SECNAV waivers for installations. Since the Initial Baseline Review, there has been one change in the Battle Force composition: USS COLUMBUS (SSN 762) replaced USS CHARLOTTE (SSN 766) (ref CPF 151700Z NOV 99). The BF composition is contained in the Target Link Architecture, appendix A.

Battle Force Issues are summarized in section 6. Specific JCS 02 information and recommendations are included. Battle Force Issues of greatest interest (those that are expected to cause significant interoperability problems and can be resolved through appropriate action) are:

Lack of Dual Net Link 11 Capability – resolution requires cross decking of DNMFL suites or tactical work-arounds.

Degraded Position Location Information – resolution requires installation of EPLRS in OGDEN (waiver required).

Intra-ARG Connectivity – resolution requires installation of Intra-ARG (VTC) system in OGDEN.

ACDS MODE 2 De-correlation – resolution requires ACDS computer program changes (schedule TBD).

Numerous, Minor ACDS BLK 0 LVL 10 Problems - resolution requires ACDS computer program changes (schedule TBD).

3.0 COMPOSITION AND CONFIGURATION

The most significant change in JCS 02 BF composition (from JCS 00 BF) is the replacement of USS DENVER (LPD 9) with OGDEN. The IBR assessment reported that several systems supporting ARG distributed computing and communications would be degraded or no longer available due to the substitution of OGDEN for DENVER. These shortfalls included: Line Of Sight (LOS) hi-bandwidth ship-to-ship and ship-to-shore communications; Frequency Agile (FA) Very High Frequency (VHF) secure voice communications; Enhanced Position Location Information (EPLI) for Operational Maneuver From The Sea (OMFTS); and command and control compatible with current USMC architecture. However, based on the SPAWAR D-25 Review presentation of 27 January 2000, some of these concerns have been alleviated. OGDEN will now have improvements in communications and networking resulting from SINCGARS, DWTS, INMARSAT B, Automated Digital Network System (ADNS) and Integrated Shipboard Network System (ISNS) installations.

Deficiencies remain aboard OGDEN in position locating reporting systems (PLRS/EPLRS), the Global Broadcast System (GBS), Sensitive Compartmented Information (SCI) ADNS, Digital Modular Radio (DMR), EHF MDR, EHF LDR and Tactical Switching System (TSS)(TRITAC). Also, the Intra-ARG VTC that is planned for all ARG DWTS ships is not scheduled for OGDEN.

Without GBS, OGDEN will not have full IT-21 Wideband receive capability and will need to use other communication systems to receive required information. Lack of EHF LDR and MDR will

severely limit OGDEN's SATCOM capability (and she will not have full IT-21 survivability communications). Lack of these SATCOM capabilities will reduce the available bandwidth on other systems and require other units to pass vital info using alternate methods.

The Initial Baseline Review was conducted by NAVSEA 53 on 23 September 1999 in accordance with COMNAVSEA message 270525Z JUL99. The initial Combat Systems baseline configuration is shown in the NAVSEA Afloat Master Plan (AMP) database.

4.0 ADDITIONAL NEW CAPABILITES

Capabilities beyond those listed in the IBR assessment are those noted for OGDEN above, changes in the reported Navigational Sensor System Interface (NAVSSI) installation plans, and plans for the Battle Force Tactical Training (BFTT) and the BFTT Electronic Warfare Trainer.

4.1 Navigation Sensor System Interface (NAVSSI) collects and processes navigation data from ship sensors and external navigation sources (GPS) and distributes real time position, velocity and time to Weapon Systems, Combat Support Systems, Bridge and other users. The system also provides the navigation workstation with navigation data and a display/tool capability for Digital Nautical Charts (DNC). The Block 2 system is in PORT ROYAL, LAKE CHAMPLAIN, ELLIOT, and PEARL HARBOR. The Block 3 system associated with the WSN-7 Ring Laser Gyro Navigation (RLGN) will be installed in STENNIS, LAKE CHAMPLAIN and HOPPER. The NAVSEA TLS does show LAKE CHAMPLAIN, PORT ROYAL, and DECATUR are to receive the RLGN.

4.2 AN/USQ-T46A(V) Battle Force Tactical Training (BFTT) provides an in-port, combat system team training capability from individual unit to Battle Force level with connectivity to joint training. BFTT includes ACTS rehosted in BFTT (MK 50 ACTS) on AEGIS ships. Version 3.0 is a software upgrade that provides fixes for numerous high priority trouble reports, provides operator enhancements (more user friendly), and integrates BFTT with BEWT.

4.3 AN/USQ-T47(V) BFTT Electronic Warfare Trainer (BEWT) provides a BFTT system capability enhancement that replaces the electronic warfare (EW) onboard trainer (OBT) with a COTS based shipboard EW training system. BEWT is capable of operating in both stand-alone and fully integrated modes with BFTT and AEGIS Combat Training System (ACTS) MK 50 for shipboard combat system training.

4.4 BFTT and BEWT installations are planned in accordance with the following table (ref PEO EXW 031138Z FEB and 031139Z FEB):

Ship	BFTT	BEWT
CVBG		
JOHN C. STENNIS	**YES**	**YES**
LAKE CHAMPLAIN		
PORT ROYAL		**YES**
DECATUR	**YES**	**YES**
ELLIOT	**YES**	**YES**
JARRETT	**N/A**	
BRIDGE	**N/A**	

Ship	BFTT	BEWT
ARG		
BONNEHOMME RICHARD	**YES**	**YES**
OGDEN	**N/A**	**N/A**
PEARL HARBOR	**YES**	
MEF		
HOPPER		
FIFE	**YES**	**YES**
RUSSELL		
CARAT		
GARY	**N/A**	
SIDES	**N/A**	**N/A**
ANCHORAGE	**N/A**	**N/A**
FORT MCHENRY	**YES**	**YES**
JIATFs		
MOBILE BAY		
VALLEY FORGE	**N/A**	**YES**

4.5 Note that the two CVBG cruisers will not have BFTT for this deployment, which will inhibit the capability of the BG to train as a unit.

5.0 MISSION AREA SHORTFALLS

As stated in the IBR Assessment Report, MINE WARFARE (MIW) continues to remain a serious shortfall. The Battle Force brings no organic capabilities, and therefore must rely on in-theater assets, leaving it extremely vulnerable to the offensive mine threat. However, Commander, Mine Warfare Command (CMWC) has recognized this shortfall and has taken steps to improve the situation. In addition to the forward-deployed MIW assets in both 6th and 7th Fleets, CMWC has begun designating deployable MIW Readiness Groups, which prepare for deployment in a fashion similar to the deploying BFs. As they transition to the full D-30 process, and are more integrated into a BF mentality, this should help improve the BF MIW posture.

6.0 BATTLE FORCE ISSUES

A summary of the active issues for the STENNIS 02 BF is included below.

In addition, the Theater Battle Management Core System (TBMCS) has been found neither operationally effective nor suitable (COMOPTEVFOR 081306Z Feb 00). The TBMCS is a replacement for CTAPS (Host/Remote) systems and is currently installed in STENNIS and BONHOMME RICHARD. The impact, if any, on the JCS 02 BF will be monitored by the BFAO, Project Engineer and System Engineers.

Appendices follow the issue summaries. The Battle Force Target Link Architecture (TLA) is provided as Appendix A. EMI items are tabulated in Appendix B.

Issue JCS02-001: Lack of Dual Net Link 11 Capability

Issue Summary: All major theater net architectures (Joint Task Force/South West Asia (JTF/SWA), Korean, and recently, the Adriatic) incorporate Dual Link 11 nets. Installation of Dual Net Multi Frequency Link (DNMFL) suites (two per BG minimum) is required. There are insufficient DNMFL suites available and there are currently no Dual Net capabilities for Model 5 ships.

STENNIS BF Specific Info: STENNIS and LAKE CHAMPLAIN are Model 4 ships capable of hosting DNMFL. Multiple BF units will have S TADIL J capability, which can be used to alleviate need for secondary TADIL A network. A Model 5 Dual Net capability will not be fielded in time for this BF.

Recommendations:

1) Cross-deck DNMFL into STENNIS and LAKE CHAMPLAIN prior to deployment. Cross-deck early enough, at least prior to JTFEX, for ships' force to train with it.
2) Actively maintain a solution path centered on tactical work-arounds. Task one or more Tactical Development agency to assess how the Battle Force might operate without DNMFL. Publish the results of these studies as TTPs and push to training commands so curricula can be developed. Subsequently, as the TTPs are validated during Link operations, feedback to training commands must be ensured.

Issue JCS02-002: Data Registration/Gridlock Problems

Issue Summary: Data Registration is the process of aligning coordinate systems so that all units participating in a TADIL have a common reference frame. TADIL A and TADIL J (Links 11 and 16) use very different Data Registration methods. To date, only the Group 2 E2Cs and ACDS Blk 1 ships even attempt to perform true TADIL J data registration (their specs indicate they perform Link 16 data registration). While bringing Navy units into compliance with TADIL J standards should help some Joint data registration problems, it is not at all clear that such action alone will solve the problem. Data Registration and Gridlock will remain problematic, particularly in the Joint environment, until all units perform Link 16 data registration. A common Data Registration methodology is required.

STENNIS BF Specific Info: Will **not** be resolved for JCS02 BF. Within the Multi-TADIL JCS 02 Battle Force itself, Data Registration will be a problem as with past Battle Forces until this issue is addressed at a minimum in Model 5 programs.

Recommendations: Conduct training, including complete technical discussions in the Caps & Lims publication, and address via tactical discussions led by the tactical community in their documentation and training.

Issue JCS02-003: ID Conflict Resolution – Change Data Orders

Issue Summary: Not all units in a Battle Force correctly respond to ID changes. This leads to almost continuous ID conflicts across the Battle Force, which confuses the picture and burdens operators. Frequently, those in tactical command may be completely unaware that the ID of a given track is in dispute. Immediate improvement can be gained by ensuring all units correctly respond to Change Data Orders (CDOs).

STENNIS BF Specific Info: Will **not** be resolved for JCS02 BF. Units scheduled to operate in or with JCS 02 Battle Force require attention. For example, CDS Level 13 (planned for USS GARY (FFG 51)) has been observed to disregard Force ID orders - the displayed ID changes but the old ID is still reported on the link. In the DD 963 class, the CDS program fails to accept Force ID Orders if

the track in question is already involved in an ID conflict – a situation where, presumably, one most wants the Force Order to take effect.

Recommendations: Actively maintain Caps and Lims solution. Continue to work around with voice communications.

Issue JCS02-004: Space Track Implementation

Issue Summary: Space Surveillance is limited. While all AEGIS ships can track "Space Objects" (and a few "Linebacker" units can truly plan surveillance and respond to cueing), very few non-AEGIS units can process Link Space Track messages. No other Navy units can process this data across the TADILs (neither the track itself nor the "launch and crater" points), although GCCS-M units can see the data, time late. In particular the Carrier cannot see the TADIL Space Track picture since neither ACDS Blk 0 or 1 processes Space Tracks. There is a partial work-around for ACDS Block 0 units. If such units are equipped with Dual Net/Multi-Frequency Link (DNMFL), the DNMFL can be set up to translate Space Tracks and Launch/Impact points into Air Tracks and Special points.

STENNIS BF Specific Info: The installation of DNMFL provides a limited ability to share space tracks across the link. This is the only way that Model 4 ships can receive and display space tracks.

Recommendations:

1) Ensure that STENNIS deploys with DNMFL or with a similar system to allow the display of space tracks.
2) Recommend to tactical agencies that a Model 5 AEGIS ship participate in the DNMFL air defense net as a space track sensor.

Issue JCS02-005: Degraded Position Location Information

Issue Summary: USN upgrade to EPLRS is not totally funded. Unless EPLRS installations are accelerated, USN will deploy mixed PLRS and EPLRS Battle Forces. While PLRS and EPLRS are minimally compatible, the insertion of any PLRS units into an EPLRS network brings network performance down to the lowest common denominator.

STENNIS BF Specific Info: USN will deploy mixed Position Location Reporting System (PLRS) and Enhanced PLRS (EPLRS) for this BF. USMC will have upgraded to EPLRS by this time. USN upgrade to EPLRS is not totally funded. BONHOMME RICHARD and PEARL HARBOR will have EPLRS but OGDEN will not. OGDEN has a full-sized PLRS master station making an upgrade to EPLRS an expensive proposition. Unlike later PLRS installations, this will not entail a simple radio swap and new software delivery. An industrial period will be required to remove the legacy UYK-7s, UYK-44s, and Master Station Operators Console.

Recommendations: Accelerate EPLRS for OGDEN, or deploy DENVER instead of OGDEN.

Issue JCS02-006: Air Control Interoperability Problems

Issue Summary: The introduction of Air Control Revision (ACR) software on Link 16 capable aircraft may cause interoperability problems with other units in the fleet. Battle Forces will deploy with a mix of ACR and non-ACR aircraft, and Model 4 and Model 5 ships. Testing must be completed on all mixes of ACR/non-ACR aircraft and Model 4/5 ships.

STENNIS BF Specific Info: Not expected to be a major issue for JCS02 BF, but training and work-arounds will be required. The STENNIS Battle Force will contain a mix of M5 and M4 ships, and both ACR and non-ACR aircraft. The M4 ships will not be able to communicate with the ACR aircraft on link 16. In addition the non-ACR aircraft will have a choice of selecting either link 4A

(fighter to ship) or link 4C (fighter to fighter). They cannot operate both simultaneously. Those impacts have been assumed to be tolerable during the transition period; however they will impact operations with the US Air Force, the US Army, and allies. Testing of various combinations will continue during Battle Group Interoperability Testing (BGIT), and Battle Forces deploying prior to JCS02 will provide additional information.

Recommendations:

1) Maximize the use of M5 AEGIS combatants as AAW Commander.

2) Provide difference training in support of the interdeployment training cycle and discuss the issue in BF Caps and Lims.

Issue JCS02-007: (SPAWAR Funding Profile Not Aligned With 4720.3A Requirements) WITHDRAWN

Issue JCS02-008: Intra-ARG Connectivity

Issue Summary: Operational need for Intra-ARG VTC capability was established by CINCPACFLT 202028Z Apr 99, CINCLANTFLT 232337Z Apr 99 and OPNAV 0520208Z May 99. Requirement for Digital Wideband Transmission System (DWTS) to support voice, video and data has been, and continues to be, an operational requirement for ARG/MEU to support the Rapid Response Planning Process (R2P2). Ships also require Video Information Exchange System (VIXS) or Intra-ARG system in order to have At-sea VTC capability.

STENNIS BF Specific Info: BONHOMME RICHARD and PEARL HARBOR currently have DWTS installed (and VIXS). Issue is expected to be partially resolved through installation of DWTS in OGDEN. However, the Intra-ARG VTC capability that will be in the other amphibious ships of the ARG (and CARAT) is not planned for OGDEN.

Recommendations: Install Intra-ARG (VTC) system in OGDEN.

Issue JCS02-010: ACDS MODE 2 De-correlation

Issue Summary: The Advanced Combat Direction System (both BLK 0 and BLK 1) performs an automatic decorrelation of mutual tracks when a Mode 2 conflict occurs (in accordance with specs). Due in part to chronically poor IFF/Radar association, this decorrelation results in the generation of multiple dual track situations.

STENNIS BF Specific Info: **Not expected to be resolved for JCS 02 BF– resolution schedule TBD.**

Recommendations: Modify the ACDS programs via the ECP process to make the mode 2 decorrelation process a manual operator action.

Issue JCS02-011: Numerous, Minor ACDS BLK 0 LVL 10 Problems

Issue Summary: ACDS BLK 0 LVL 10 has several known issues that are minor separately, but severe in total impact. Issues need to be addressed in future revisions.

STENNIS BF Specific Info: **Not expected to be resolved for JCS 02 BF.** Schedule of computer program revisions is TBD.

Recommendations: Review priorities with PARM to ensure issues addressed in future revisions of ACDS.

Issue JCS02-012: (Mixed Model 4 and Model 5 TADIL Operation) WITHDRAWN

Appendix A

The table on the next page provides a summary of what units have what links and the details of the link configuration. Overall, the introduction of AEGIS Weapon System Computer Program Baseline 5.3.7 and the delivery of ACDS version 10.24 are expected to maximize available capability, and minimize the number of work-arounds. Improvements from the BFE effort will come from DEP events, the link certification process, as well as the focused effort on minimizing baselines within a BF.

Appendix A – Target Link Architecture

STENNIS / BONHOMME RICHARD Deployment 01/2002 O2 REV: 03/06/00		Combat System		Link 16				Link 11					Link 4	CEC		
		Type	Software	Hardware	Software	CDLMS	SAT-J	Terminal	STM	SAT-A	MFL	DNL		USG	SW	(E)PLRS
CVBG SHIPS																
CVN 74	JOHN C STENNIS	ACDS	10.24	C2P	M4R4XX		Y	USQ-125v4	Y	Y			Y			
CG 57	LAKE CHAMPLAIN	AWS	2.10.2	C2P	M4R4XX		Y	USQ-125v4	Y	Y			Y			
CG 73	PORT ROYAL	AWS	5.3.7	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y			
DDG 73	DECATUR	AWS	5.3.7	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y			
DD 967	ELLIOT	CDS	Lvl 9+					USQ-125v4	Y	Y						
FFG 33	JARRETT	CDS	Lvl 7					USQ-74								
AOE 10	BRIDGE															
SSN 759	JEFFERSON CITY	AN/BYQ-6	SFMPL 6.0	SJP			Y	USQ-76								
SSN 762	COLUMBUS	AN/BYQ-6	SFMPL 6.0	SJP			Y	USQ-76								
CVW - 9																
VF-211	F-14A LANTIRN												Y			
VFA-146	F/A-18C												Y			
VFA-147	F/A-18C												Y			
VMFA-314	F/A-18C												Y			
VAQ-138	EA-6B Blk 89												Y			
VAW-112	E-2C Group 2			JTIDS				TADIL A					Y			
VS-33	S-3B							TADIL A					Y			
HS-8	SH-60F / HH-60H															
BONHOMME RICHARD ARG																
LHD 6	BONHOMME RICHARD	ACDS	10.24	C2P	M4R4XX		Y	USQ-125v4	Y	Y			Y			E
LPD 5	OGDEN							USQ-125v1	Y							
LSD 52	PEARL HARBOR	SSDS	1.1.1					USQ-125v4	Y	Y						E
ACU 5	LCAC															P
15 MEU	GCE: BLT 1/4; INFANTRY 2/5; D Co. 3D LAR Bn; A Co. 3D AABN; K Co. 3/12 ARTILLERY BATT. MSSG-15; ACE: HMM-166; VMA-513															P
MEF 02-1																
DDG 70	HOPPER	AWS	5.3.7	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y			
DD 991	FIFE	CDS	Lvl 9+					USQ-125v4	Y	Y						
DDG 59	RUSSELL	AWS	5.3.7	C2P(R)	R5R5XX	Y	Y	CSDTS	Y	Y	Y		Y			
CARAT 02																
FFG 51	GARY	CDS	Lvl 13					USQ-74								
FFG 14	SIDES	CDS	Lvl 12					USQ-74								
LSD 36	ANCHORAGE															
LSD 43	FORT MCHENRY															
COUNTER NARCOTICS JIATF EAST																
CG 53	MOBILE BAY	AWS	2.10.2	C2P	M4R4XX		Y	USQ-125v4	Y	Y			Y			
COUNTER NARCOTICS JIATF WEST																
CG 50	VALLEY FORGE	AWS	1.4.3					USQ-125v4	Y	Y			Y			

COMPOSITION MESSAGE : 061708Z JUL 99 CPF NOTE: BON HOMME RICHARD has KSQ-EPLRS with Net Control Station (NCS)

Appendix B - EMI Issues Status

Significant EMI issues for the STENNIS-BONHOMME RICHARD 02 BF are in tables below.

CORRECTED

PROB ID		SOURCE SYSTEM	VICTIM SYSTEM	CVN 74	AOE	CG 50	CG 53	CG 57	CG 73	DD 96	DD 99	DDG	DDG	DDG	FFG 14	FFG 33	FFG 51	LHD 6	LPD 5	LSD 36	LSD 43	LSD 52	SSN 759	SSN 766
63-77	AC	HF TRANSMISSIONS	OE-273/URN TACAN	F	F					F	F				F	F	F		F		F	F		
17-81	AD	HF TRANSMISSIONS	SGSI							F					F	F	F		F					
12-92	CC01	MK 23 TAS	INMARSAT		F					F								F						
149-83	CE	MK 92 MOD 2	AN/SSR-1												F	F	F							
32-87	CK	HF TRANS/HIGH PWR RA	AN/WSC-3(V) LOS	F																				
36-93	CM04	AN/SPS-49(V)	INMARSAT	F		F	F	F	F								F	F				F		
28-96	CO	AN/SPS-48E	AN/WSC-8(V)	F														F						
50-93	EN	LINK 16 (JTIDS)	AN/WLR-1H	F																				
26-76	EQ	CLASS B1 RADAR	EW EQUIPMENT	F	F	F	F	F	F	F		F	F	F	F	F	F	F	F	F		F		
34-95	ES	AN/SLQ-32A(V)3	AN/SLQ-32A(V)3				F	F	F															
24-89	EW	SHIPBOARD EMITTERS	AN/WLR-1H	F																				
20-92	EZ	AN/SLQ-32(V)4	AN/SLQ-32(V)4	F																				
90-77	HA	HF TRANSMISSIONS	CCS TRANSDUCERS								F													
36-83	HD01	FIRE PUMPS	FIRE ALARMS			F	F		F	F	F													
65-79	RD	AN/SPN-43	AN/SPS-48	F																				
14-81	RE	AN/URN-25	AN/SPS-49(V)			F	F	F	F															
7-85	RL	AN/SLQ-32(V)3/4	NSSMS MK 91	F														F						
23-80	SC	HF TRANSMISSIONS	AN/SSQ-61/61A												F	F	F							
130-83	SD	AN/WLR-9	AN/WLR-9/12																				F	F
63-79	SF	SHIP POWER	AN/SQS-53/53A							F	F													
50-97	WB	HF TRANSMISSIONS	MK 99 FCS									F	F	F										
4-95	WF	HF TRANSMISSIONS	AN/SPG-62			F	F	F	F															
31-82	WG	MK 92 STIR	MK 15 CIWS BLK 0												F	F								
6-79	WK	HF TRANSMISSIONS	NSSMS MK 91	F	F													F						
28-86	WM	NSSMS MK 91	NSSMS MK 91	F																				
31-94	WN	MK 15 CIWS BLK 1	MK 15 CIWS BLK 1			F	F	F	F			F	F	F										
137-84	WO	HF TRANSMISSIONS	MK 92 MOD 2												F	F								
69-82	WQ	NSSMS MK 91	NSSMS MK 91								F													
17-87	WU01	AN/SPS-40	MK 15 CIWS BLK 0							F	F									F				
14-92	WV01	AN/SPS-49/40(V)	MK 15 CIWS BLK 1	F	F	F	F	F	F	F	F	F	F	F				F						
27-96		UHF TRANSMISSIONS	AN/USQ-122(V)		F													F						
60-81		AN/SPS-49(V)	AN/WSC-3(V)11															F						
42-93		AIR SEARCH RADARS	MK 15 CIWS BLK 1	F		F	F	F	F	F	F	F	F	F				F						

FUNDED

PROB ID		SOURCE SYSTEM	VICTIM SYSTEM	CVN 74	AOE 10	CG 50	CG 53	CG 57	CG 73	DD 967	DD 991	DDG 59	DDG 70	DDG 73	FFG 14	FFG 33	FFG 51	LHD 6	LPD 5	LSD 36	LSD 43	LSD 52	SSN 759	SSN 766
4-92	AF	HF TRANSMISSIONS	SGSI								X													
42-86	CA	SHIP POWER (60 HZ)	AN/BRA-34																				X	X
12-92	CC01	MK 23 TAS	INMARSAT								X													
87-82	CG03	AN/SPS-49(V)	IVCS PHONE TERMINALS			X	X	X	X															
73-78	EB04	AN/SPS-40	AN/SLQ-32(V)							X	X													
74-78	EB06	AN/SPS-49(V)	AN/SLQ-32(V)												X	X	X							
62-84	EB07	AN/SPS-67	AN/SLQ-32(V)									X	X	X										
135-84	EB09	AN/SPY-1	AN/SLQ-32(V)			X	X	X	X			X	X	X										
5-88	EB16	MK 15 CIWS BLK 0	AN/SLQ-32(V)												X	X	X							
3-95	EB17	AN/SPS-55	AN/SLQ-32(V)			X	X	X	X	X	X													
254-82	EB18	MK 92 CAS	AN/SLQ-32(V)												X	X	X							
4-91	ER	AN/SPS-49(V)	AN/WLR-1H	X																				
34-95	ES	AN/SLQ-32A(V)3	AN/SLQ-32A(V)3			X																		
35-91	EY02	MK 92 CWI AND DF BLA	AN/SLQ-32(V)2/5												X	X	X							
38-91	EY05	AN/SPG-62 AND DF BLA	AN/SLQ-32(V)2/3			X	X	X	X			X	X	X										
90-77	HA	HF TRANSMISSIONS	CCS TRANSDUCERS							X					X	X	X							
21-87	HD03	FUEL/LUBE OIL PUMPS	PLCC					X																
14-81	RE	AN/URN-25	AN/SPS-49(V)	X																				
69-82	WQ	NSSMS MK 91	NSSMS MK 91							X														

UNFUNDED

		STEN/RICHARD '02 EMI MATRIX (as 0f 07 Jan 00)																						
PROB ID		SOURCE SYSTEM	VICTIM SYSTEM	CVN 74	AOE 10	CG 50	CG 53	CG 57	CG 73	DD 967	DD 991	DDG 59	DDG 70	DDG 73	FFG 14	FFG 33	FFG 51	LHD 6	LPD 5	LSD 36	LSD 43	LSD 52	SSN 759	SSN 766
74-80	EB05	AN/SPS-48	AN/SLQ-32(V)	X														X						
74-78	EB06	AN/SPS-49(V)	AN/SLQ-32(V)	X														X				X		
62-84	EB07	AN/SPS-67	AN/SLQ-32(V)	X	X													X						
237-82	EB15	AN/SPS-64	AN/SLQ-32(V)	X														X				X		
41-96	EO	"C" BAND SATCOM	AN/SLQ-32(V)															X			X			
26-76	EQ	CLASS B1 RADAR	EW EQUIPMENT																		X			
37-91	EY04	NSSMS AND DF BLANKI	AN/SLQ-32(V)1/2/3/4	X	X													X						
60-81		AN/SPS-49(V)	AN/WSC-3(V)11	X																				
20-94		AN/SPS-67	AN/WSC-6(V)	X																				

FDNF "Swapout" Assessment
USS COWPENS (CG 63) for USS MOBILE BAY (CG 53)

EXECUTIVE SUMMARY:

COWPENS will provide significantly increased capability in AAW, ASW and STK warfare areas. Although initially less capable than MOBILE BAY from a C4I standpoint, COWPENS has numerous installations planned before swapout and just after arrival that will provide equivalent or better capability in this area and bring her to a full IT-21 standard. NPOR systems will need to be identified and cross-decked to retain capability in FDNF.

COWPENS has a Baseline 3A AEGIS Combat System (ACS), which provides functionality of a Baseline 5 Phase 3 ACS. This includes a Model 5 Command Control Processor (C2P) and the Baseline 5.3.7/3A.0.9 upgrades that will greatly improve TADIL interoperability within the Battle Force. Other systems that provide increased capability include AN/SPY-1B, ATWCS, ASWCS Mk 116 Mod 7, Track Initiation Processor (TIP), and SQR-19 TACTAS. COWPENS will not however, have SARTIS, which MOBILE BAY is expected to have installed.

CAPABILITY CHANGES BY WARFARE AREA:

AAW: COWPENS will provide improved AAW capability with the AN/SPY-1B Radar System, TIP, OJ-451 consoles and increased capability of UYK-43/44 computers with LLS interfaces. In addition to improvement in organic sensors, situational awareness will be improved with the added capabilities brought by a Model 5 Combat System (including C2P and JTIDS). The 3A.0.**9** version of AEGIS Weapon System (AWS) computer program Baseline 3A corrected many open high priority and high visibility CPCRs in the AWS, including over 150 interoperability corrections. The associated C2P and SGS programs also provide fixes to interoperability problems of previous versions.

MOBILE BAY is expected to get SARTIS, which COWPENS is not. This will leave the Battle Force with only one AEGIS Cruiser (VINCENNES) with the ability of SARTIS to perform non-cooperative target recognition functions. Although this is significant, the additional AAW capabilities of COWPENS far outweigh this drawback.

ASU: There is no significant difference in the Surface Warfare Mission Area, although the increased capabilities of the B/L 3A Combat System will provide additional situational awareness.

ASW: COWPENS will have significantly better ASW capabilities with the MK 116 Mod 7 ASWCS and SQR-19 TACTAS.

STK: COWPENS also will have the increased Strike Warfare capabilities of ATWCS. However, ATWCS will not be interfaced to C&D as TWCS was in MOBILE BAY.
A Land Attack Warfare System (LAWS) workstation will need to be cross-decked from MOBILE BAY to COWPENS and integrated into EHF system in COWPENS.

C4I: COWPENS is scheduled to have numerous C4I-related systems installed that will provide the capabilities that MOBILE BAY currently has (or will get soon) and bring the ship up to full IT-21 standard. COWPENS currently has GCCS M 3.1.1, EHF SATCOM

LDR, ADNS prototype and NECC. Installations planned for COWPENS (according to SPAWAR FDNF swapout brief, provided by CDR John Pope, SPAWAR 04F) include: INMARSAT B w/ HSD (early FY 00), UHF SATCOM 5KHz (Jan/Feb 00), ATM LAN (after swapout, date TBD), ADNS 2.0 (after swapout, date TBD), GBS (after swapout, date TBD), NTCSS Inc 1 (after swapout, date TBD), SHF SATCOM AN/WSC-6(V)7 (FY 01 date TBD) and NAVMACS/SMS (FY 01 date TBD) . FY 00 C4I installations are funded, but schedule deconfliction is required.

TAB D

SITREP Template

A copy of a SITREP is provided on the following pages.

PHD NSWC Battle Force Interoperability Engineering and Support
Weekly Report 14 July 2000

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Executive Summary

1. Battle Forces (Pre-Deployment)

- **LINCOLN/TARAWA Battle Force (00) (D-1)**

  Met with CCDG 3, RADM Balisle, to wrap up D-30 issues for LIN 00. Topics included LINK management, Final Capabilities and Limitations, SSU upgrade for S-3, remaining installations, and D+2 feedback requirement.

- **TRUMAN/NASSAU Battle Force (00) (D-4)**

  NIMA 102215Z JUL 00 offers temporary hardware and software installation of NIMA Product Server (NPS) Automated Imagery Retrieval System post TCD aboard NASSAU in support of 22 MEU operations. IT-21 certification is not complete to date.

- **CONSTELLATION/BOXER Battle Force (01) (D-8)**

  BFAO represented NAVSEA at the Pre-TCD Meeting at CNSP on 10 July. CCDG1 and CPG3 briefed the status of their installs to CNSP. Following Flag Officers were in attendance: VADM Moore - CNSP, VADM Bowman - CNAP, RADM Hart - CCDG1, RADM Marshall - Prospective CPG3, RADM (sel) Antanitus -SPAWAR. Following were key issues:

  Provide Data Replication/Collaborative SW capability.

  Provide Common Data Link Video Interface capability.

  BGIT – Their highest priority has been the Air Control Revision (ACR) test, which is a new capability for this BG. CCDG1 is looking to incorporate the BGIT results into their pre-deployment preps.

  SHF install in CHOSIN – CNSP SHF testing has been impacted by satellite handover problems.

  INMARSAT B HSD SATELLITE ACCESS - CCDG1 endorsed the Flag C4I Day request for additional channels.

  C4I installations for BENFOLD and RAINIER - Considered "high risk" by CCDG1. Twelve-week timeline for installations is being compressed into a 7-8 week availability period (August through 02 October).

- **ENTERPRISE/KEARSARGE Battle Force (01) (D-9)**

  SLQ-32 version R17.03 software is scheduled for delivery to PHILIPPINE SEA 14-18 Aug 00. However, eCCB action is required before install can proceed.

  BFTT install for NICHOLSON is being moved to CARNEY. The installation cannot be completed before TCD and CARNEY requires this system. Reference COMJFKBATGRU 211830Z JUN 00 and C2F 261917Z JUN 00 messages. Expect a message this week detailing this change.

- **VINSON/PELELIU Battle Force (01) (D-11)**

  Test Readiness Review (TRR) has been rescheduled for 26 JUL 00. Participation by CCG 3 N6 and TFCC Officer was planned for VTC on 2 AUG. Due to Exercise Global Warrior, CCG 3 Staff will not be able to attend the TRR on 26 JUL

  BFAO and OSR visited NUWC Keyport for a brief on the Anti Underwater Submarine Warfare Concept (AUSWC) EDM. Brief was well done and showed their desire to follow all the requirements of the D-30 process.

  RADM Zelibor relieved RADM McCabe as CCG 3 on 10 Jul.

- **THEODORE ROOSEVELT/BATAAN Battle Force (01) (D-14)**

  CINCLANTFLT 112045Z JUL 00 addresses cancellation of fleet support for CV AUTO ID, endorses CNSL and other requests for continuation, and requests OPNAV continued funding support for the system.

- **GEORGE WASHINGTON/SAIPAN Battle Force (02) (D-24)**

  Conducted Initial Baseline Review Assessment on 13 July. Results of IBR will be documented in a message due out in two weeks.

- **TRUMAN/NASSAU Battle Force (02) (D-30)**

  CLF 122250Z JUL 00 announces composition for TRU 02 BG.

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2. Deployed Battle Forces

- **GEORGE WASHINGTON/SAIPAN Battle Force**

  COMGWBATGRU 092210ZJUL 00 SUBJ/COLLABORATION AT SEA (CAS) WEEK THREE STATUS REPORT indicates implementation is progressing well and outlines issues with required actions.

  NIMA RESTON 102215Z JUL 00 non-standard install request is submitted for NIMA Product Server (NPS) automated imagery retrieval system temporary install in SAIPAN and NASSAU to support 26 MEU MED 3-00 and 22 MEU MED 3-01 deployments.

  NORMANDY 050205Z JUL 00 request a Tech. Assist NLT 12 July for SPQ-9A stabilization causality.

- **STENNIS/BONHOMME RICHARD Battle Force** – Nothing to report.

- **EISENHOWER/WASP Battle Force** – Nothing to report.

- **KITTY HAWK/BELLEAU WOOD Battle Force (FDNF)**

  VADM Metzger relieved VADM Doran as C7F.

  LCDR Downey relieved LCDR Reinagel as OIC SPAWAR Yokosuka on 14 July 00.

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3. Up-Coming Events (through DEC 00)

DATE 00	*BATTLE FORCE*	*EVENT*
7/17/00	JFK 02	CONFIGURATION BASELINE IN-PROCESS REVIEW
7/18/00	LIN 02	BASELINE REVIEW BOARD
7/20/00	JFK 02	CEC OPEVAL MILESTONE D FLAG DECISION BOARD
7/25/00	ENT 01/CON 01	BGIT ANALYSIS REVIEW PANEL (BARP)
7/26/00	FDNF	BELLEAU WOOD/ESSEX EXCHANGE OF COMMAND
7/26/00	VIN 01	BGIT TEST READINESS REVIEW (TRR)
7/27/00	ENT 01	OPS DAY -BARP
7/31/00	JFK 02	JFKBATGRU AIR DEFENSE SYNDICATE CONFERENCE
8/1/00	TRU 01	COMPTUEX/BGSIT FIT
8/7/00	VIN 01	BGIT
8/14/00	FDNF	KITTY HAWK COMBAT SYSTEMS READINESS REVIEW (CSRR)
8/20/00	LIN 00	ABRAHAM LINCOLN DEPLOYMENT
8/23/00	CON 01	OPERATORS DAY - BARP - THIRD SESSION
8/30/00	ENT 01	PRE-TCD CONFERENCE
9/5/00	TRU 00	NASSAU ARGFIT
9/14/00	CON 03	INITIAL BASELINE REVIEW (IBR)
9/15/00	CON 01	TCD
9/18/00	JFK 02	CEC UNDERWAY #10 (HUE CITY, VICKSBURG, WASP, SULLIVANS)
9/18/00	FDNF	ATRCD BATTLE GROUP MULTI-TADIL TRAINING (BGMTT)
10/2/00	VIN 01	BGIT ANALYSIS REVIEW PANEL (BARP)
10/2/00	STN 02	PIA1 - CNO AVAILABILITY
10/25/00	ENT 01	TCD
11/1/00	RSV 01	BGIT TEST READINESS REVIEW (TRR)
11/2/00	JFK 02	CEC OAG MEETING
11/6/00	RSV 01	BGIT
11/13/00	CON 01	CONSTELLATION CSRR
11/28/00	TRU 00	TRUMAN Deployment
11/28/00	JFK 02	CEC UNDERWAY #11 (JFK, HUE CITY, VICKSBURG, CARNEY, SULLIVANS)
12/15/00	VIN 01	TCD

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4. Battle Force Summaries

KITTY HAWK/BELLEAU WOOD Battle Force (FDNF)

Accomplishments

ESSEX arrived Sasebo; turnover with BELLEAU WOOD in progress.

COMCARGRU FIVE 070655Z JUL 00 endorses the upgrade of the INMARSAT B transceivers for all FDNF ships. Tokyo Bay is a high EMI area precluding the use of INMARSAT within approx. 35 NM of Yokosuka. The new pierside LAN provides connectivity for docked ships but those at anchor or underway in the area are effectively denied INMARSAT access. The upgraded transceiver is already installed in GARY, JOHN S MCCAIN, and OBRIEN.

VADM Metzger relieved VADM Doran as C7F.

Attended Campaign Battle Management Working Group with C7F onboard BLUE RIDGE. Notes to be provided sepcor.

Provided Battle Force Interoperability brief to FORT MCHENRY. The following personnel were in attendance: (OPS, LCPO, and various IT1). Major issues raised were NOW, DMR & NAVSSI installs, upcoming RAM install (FY01), INMARSAT interference, install teams showing up with little or no notice, BF email, SINCGARS. Notes provided sepcor.

PATRIOT (98 % complete) & GUARDIAN (95% complete) IT-21 installs continue ahead of schedule.

LCDR Downey will relieve LCDR Reinagel as OIC SPAWAR Yokosuka on 14 July 00.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
7/26/00	***USFJ QUARTERLY JTIDS USERS MEETING***	Yokota AB
7/26/00	***BELLEAU WOOD/ESSEX EXCHANGE OF COMMAND***	
8/10/00	***MONTHLY VTC***	
8/14/00	***KHK COMBAT SYSTEMS READINESS REVIEW (CSRR)***	Yokosuka
9/18/00	***KITTYHAWK ATRCD BATTLE GROUP MULTI-TADIL TRAINING (BGMTT)***	
10/00	***C7F N6 CONFERENCE***	Yokosuka

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LINCOLN/TARAWA Battle Force (00) (D-1)

Accomplishments

BFAO visited the Pacific Northwest. BFAO and OSR met with CCG 3 N6 assistant LCDR Wade Schmidt. In addition Multinational Intelligence Interoperability Initiative (MI3) and a Video Information Exchange System (VIXS) upgrade installs reported last week, Video Tele Training (VTT) and Joint Aviation Technical Data Integration (JATDI) have also been added for install during LINCOLN POM. TCD waiver for VTT has been submitted, TCD waiver for

VIXS still required but intended. Though TCD waiver has been approved for JATDI, there is little documentation for the system and currently no drawings for the install.

BFAO, NAVSEA 53 West Coast Senior Liaison, and PNW OSR met with CCDG 3, RADM Balisle, to wrap up D-30 issues for LIN 00. Topics included LINK management, Final Capabilities and Limitations, SSU upgrade for S-3, remaining installations, and D+2 feedback requirement.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
8/20/00	***LIN 00 Deployment***	

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TRUMAN/NASSAU Battle Force (00) (D-3)

Accomplishments

BFAO arranged Havequick, TADIL, and Airwing Liaison support with BGSIT PM for upcoming COMPTUEX.

PE explained DN/MFL training opportunities to CCG2 N64. Dates for training are not firm, but interest is high.

ISEA reports TAS EMI filter will be installed in NASSAU on 2-11 Sep 00.

Issues

CLF N66 111602Z JUL 00 approves SLQ-32 software version R17.03A01 installation in DEYO and STUMP. CLF N66 111638Z JUL 00 approves SLQ-32 ECP 540 video blanking on MITSCHER. Still to be resolved is delivery schedule for SAN JACINTO, CARR, TRUMAN, and NASSAU.

NIMA 102215Z JUL 00 offers temporary hardware and software installation of NIMA Product Server (NPS) Automated Imagery Retrieval System post TCD aboard NASSAU in support of 22 MEU operations. IT-21 certification is not complete to date.

CLF N66 110034Z JUL 00 approves Challenge Athena III installation in NASSAU contingent on SPS 48 EMI filter. CLF N66 072358Z JUL 00 reiterates its request to CNO N8 for additional EMI funding.

Upcoming Events

Date	*Title*	*Location*
7/17/00	***TRU 00/MIT C4ISR CHECKOUT***	
7/21/00	***TRU 00 BGSIT PRE SAIL MEETING***	Norfolk, VA
8/1/00	***TRU 00 COMPTUEX/BGSIT FIT***	
8/25/00	***FLEET BG EXPERIMENT H EXECUTION***	
9/5/00	***NASSAU ARGFIT***	
10/5/00	***TRU 00 FLEETEX/JTFEX***	
10/23/00	***TRU 00 SAFE, EFFECTIVE & AFFORDABLE REVIEW***	
11/28/00	***TRU 00 Deployment***	

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CONSTELLATION/BOXER Battle Force (01) (D-8)

Accomplishments

BFAO represented NAVSEA at the Pre-TCD Meeting at CNSP on 10 July. CCDG1 and CPG3 briefed the status of their installs to CNSP. Following Flag Officers were in attendance: VADM Moore - CNSP, VADM Bowman - CNAP, RADM Hart - CCDG1, RADM Marshall - Prospective CPG3, RADM (sel) Antanitus -SPAWAR. Following were key issues:

DATA REPLICATION/COLLABORATIVE SW - CCDG1 requested that this capability be provided. This program permits chat rooms in all warfare areas. STENNIS, LINCOLN, and all East Coast BGs have this and it is being utilized in the C5F and C7F AORs. CNSP and CNAP both supported the request.

COMMON DATA LINK VIDEO INTERFACE – Capability adds downlink secure, real time FLIR video and full duplex secure comms from the SH-60B to CV ASW module and is funded by NAVAIR PMA – 299. CCB item has been submitted.

BGIT – CCDG1 is very interested in the results of CONNIE's BGIT. Their highest priority has been the Air Control Revision (ACR) test, which is a new capability for this BG. CCDG1 is looking to incorporate the BGIT results into their predeployment preps.

SHF install in CHOSIN – CHOSIN is the CNSP SHF test platform. Testing has been impacted by satellite handover problems.

INM B HSD SATELLITE ACCESS - CCDG1 endorsed the Flag C4I Day request for additional channels.

C4I installations for BENFOLD and RAINIER - Considered "high risk" by CCDG1. Twelve-week timeline for installations is being compressed into a 7-8 week availability period (August through 02 October).

Issues

CINCPACFLT has approved temporary installation and test of BFTT Version 3.0.2 S/W onboard CONSTELLATION during the period 17-21 July 00.

TCD Waiver for RAINIER (AOE-7) has been approved by CINCPACFLT for the following installs: ADNS, INMARSAT B HSD MOD, UHF 5KHZ UPGRADE, JMCIS 98, NAVMACS II/SMS, NTCSS INC 5 CFCP.

RIMPAC exercise has impacted availability of INMARSAT-B HSD satellite channels, delaying post installation testing aboard many PACFLT ships. C3F to coordinate assignment of test channel(s) after conclusion of exercise.

BOXER:

<u>DIGITAL WIDEBAND TRANSMISSION SYSTEM (DWTS).</u> BOXER will OPEVAL DWTS with Block "A" upgrade for Fleet wide installation. Final SOVT to be completed during BGSIT in Oct 00.

TACTICAL SWITCHING SYSTEM (TSS)- Installation completed with the exception of four direct analog phone lines. BOXER has requested a Tech rep to complete installation. SOVT scheduled 17 Jul to 15 Sep 00.

AUTOMATED DIGITAL NETWORK SYSTEM (ADNS)- BOXER has requested a Tech rep to complete installation. SOVT scheduled 17 Jul to 15 Sep 00.

NAVY EHF COMMUNICATIONS CONTROLLER (NECC) TIME DIVISION MULTIPLE ACCESS INTERFACE PROCESSOR (TIP)- SOVT scheduled 17 Jul to 15 Sep 00.

TACTICAL VIDEO TELECONFERENCING (TAC VTC)- BOXER has requested a TAC VTC Tech rep to complete installation. SOVT scheduled 17 Jul to 15 Sep 00. (250825Z JUN 00 BOXER C4ISR Sitrep)

PAUL F FOSTER: NECC/TIP, ADNS, JMCIS 98, and CFCP SOVTs to be completed July when INMARSAT B HSD satellite test channel is available.

STETHEM: ADNS SOVT to be completed in July (date TBD) when INMARSAT B HSD satellite test channel is available.

KINKAID: ADNS and DWTS SOVTs to be completed in July (date TBD) when INMARSAT B HSD satellite test channel is available.

THACH: ADNS, JMCIS 98, and CFCP SOVTs to be completed in July (date TBD) when INMARSAT B HSD satellite test channel is available.

Upcoming Events

Date	*Title*	*Location*
7/25/00	***CON 01 BF ANALYSIS REVIEW PANEL (BARP)***	Dam Neck, VA
8/10/00	***CON 01 D-8 ASSESSMENT***	
8/23/00	***CON 01 OPERATORS DAY - BARP - THIRD SESSION***	North Island, San Diego
9/15/00	***CON 01 TCD***	
11/13/00	***CON 01 COMBAT SYSTEMS READINESS REVIEW (CSRR)***	San Diego, CA

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ENTERPRISE/KEARSARGE Battle Force (01) (D-9)

Accomplishments

ENTBATGRU D-12 message detailing current status of all NAVSEA/SPAWAR installs to be promulgated this week.

Issues

SLQ-32 version R17.03 software is scheduled for delivery to PHILIPPINE SEA 14-18 Aug 00 however eCCB action is required before install can proceed.

BFTT install for NICHOLSON is being moved to CARNEY. The installation cannot be completed before TCD and CARNEY requires this system. Reference COMJFKBATGRU 211830Z JUN 00 and C2F 261917Z JUN 00 messages. Expect a message this week detailing this change.

Upcoming Events

Date	*Title*	*Location*
7/25/00	***ENT 01 BGIT ANALYSIS REVIEW PANEL (BARP)***	Dam Neck, VA
7/27/00	***ENT 01 OPS DAY -BARP***	CINCLANTFLT
8/25/00	***ENT 01 D-8 ASSESSMENT***	
8/30/00	***ENT 01 PRE-TCD CONFERENCE***	AMSEC Chesapeake
10/25/00	***ENT 01 TCD***	

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VINSON/PELELIU Battle Force (01) (D-11)

Accomplishments

Test Readiness Review (TRR) has been rescheduled for 26 JUL 00. Participation by CCG 3 N6 and TFCC Officer was planned for VTC on 2 AUG. Due to Exercise Global Warrior, CCG 3 Staff will not be able to attend the TRR on 26 JUL. Additionally, BFAO cannot attend on 26 JUL

BFAO and OSR visited NUWC Keyport for a brief on the Anti Underwater Submarine Warfare Concept (AUSWC) EDM and met with Vince Rothwall and LCDR Mike Hotchkiss. Brief was well done and showed their desire to follow all the requirements of the D-30 process. They do have some concerns about how to implement software changes to an EDM after the hardware install is complete and after TCD has passed. In response to this question, it was recommended that they contact LCDR Red Hoover and Donna Bedford for both guidance on software updates and to ensure interfaces associated with this system are understood by NAVSEA 53.

INGRAHAM has replaced DAVID R RAY in the VINSON Battle Group composition, reference CPF 121841Z JUL 00.

RADM Zelibor relieved RADM McCabe as CCG 3 on 10 Jul.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
7/20/00	***VIN 01 TRR PRE-BRIEF***	Arlington, VA
7/26/00	***VIN 01 TEST READINESS REVIEW (TRR)***	Arlington, VA
8/7/00	***VIN 01 BGIT***	
10/2/00	***VIN 01 BF ANALYSIS REVIEW PANEL (BARP)***	
12/15/00	***VIN 01 TCD***	

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THEODORE ROOSEVELT/BATAAN Battle Force (01) (D-14)

Accomplishments

Nothing to report.

Issues

WHIDBEY ISLAND's generator was reported to have significant problems as reported by ship's representative at the USS CARTER HALL (LSD 50) - USS WHIDBEY ISLAND (LSD 41) -

USS OAK HILL (LSD 51) Installation Working Group Splinter Meeting L00-06 held in Virginia Beach on 29 June. SUPSHIP PORTSMOUTH 071356Z JUL 00 is request for funding and authorization for USS WHIDBEY ISLAND (LSD 41) PMF NEW WORK. CNSL 102133Z JUL 00 is authorization of new work and extension of CNO availability to 29 September 00.

CINCLANTFLT 112045Z JUL 00 addresses Cancellation of Fleet Support for CV AUTO ID, endorses CNSL and other requests for continuation, and requests OPNAV continued funding support for the system.

Upcoming Events

Date	*Title*	*Location*
7/17/00	***USS VELLA GULF IT21-C4I INSTALLATION MEETING***	USS VELLA GULF
11/1/00	***RSV 01 TEST READINESS REVIEW (TRR)***	Wash, DC
11/6/00	***RSV 01 BGIT***	

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STENNIS/BONHOMME RICHARD Battle Force (02) (D-18)

Accomplishments

The NAVSEA 53H BFI CCB Chair recommends approval of Risk Form (RF # STN 02-0010 (732)) for the DELETION from the Baseline of Video Blanking (ECP 540) on AN/SLQ-32(V) Electronic Warfare System, hardware only, onboard FORT MCHENRY with a low risk assessment. Resultant Configuration at TCD is AN/SLQ-32A(V)1 Electronic Warfare System.

The NAVSEA 53H BFI CCB Chair recommends approval of Risk Form (RF # STN 02-0009 (734)) for the DELETION from the Baseline of Video Blanking (ECP 540) AN/SLQ-32(V) Electronic Warfare System, hardware only, onboard PEARL HARBOR with a low risk assessment. Resultant Configuration at TCD will be AN/SLQ-32A(V)1 Electronic Warfare System.

The NAVSEA 53H BFI CCB Chair recommends approval of Risk Form (RF # STN 02-0008 (867)) for the DELETION from the Baseline of IFM/RF Blanker (ECP 585) AN/SLQ-32(V) Electronic Warfare System, hardware only, onboard BRIDGE with a low risk assessment. Resultant Configuration at TCD will be AN/SLQ-32A(V)3 Electronic Warfare System.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
10/2/00	***STN 02 PIA1 - CNO Availability***	

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KENNEDY/WASP Battle Force (02) (D-21)

Accomplishments

BFAO scheduled to attend CEC OPEVAL Milestone D meeting at CNSL.

CLF N3 122250Z JUL 00 provides the latest composition of deploying battle groups. SEATTLE officially replaced MT BAKER and BIG HORN.

Issues

SPAWAR 04F 101732Z Jul 00 provides update of installation windows for consideration at the upcoming Configuration Baseline IPR.

CLF N66 071208Z JUL 00 lists status of D-24 action items and directs closure NLT 21 Jul 00.

Upcoming Events

Date	*Title*	*Location*
7/17/00	***JFK-WSP 02 CONFIGURATION BASELINE IN-PROCESS REVIEW***	Crystal City, VA
7/20/00	***CEC OPEVAL MILESTONE D FLAG DECISION BOARD***	Norfolk, VA
7/31/00	***JFKBATGRU AIR DEFENSE SYNDICATE CONFERENCE***	CCG 6 Conf Rm
8/14/00	***JFK 02 SRA***	
9/18/00	***CEC UNDERWAY #10 (HUE CITY, VICKSBURG, WASP, SULLIVANS)***	
10/2/00	***WASP PMA***	
11/2/00	***CEC OAG MEETING***	Mayport, FL
11/28/00	***CEC UNDERWAY #11 (JFK, HUE CITY, VICKSBURG, CARNEY, SULLIVANS)***	

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LINCOLN/BELLEAU WOOD Battle Force (02) (D-23)

Accomplishments

Produced and distributed the LIN 02 Battle Force Assessment Report in preparation for the BRB scheduled for 18 July. The assessment is an update to the D-25 report and provides information on configuration, new capabilities, BGSIT issues, EMI status and Interoperability Issues.
BFAO will be in San Diego next week for LIN 02 Baseline Review Board.

Issues

No issues to report.

Upcoming Events

Start_Date	*Title*	*Location*
7/18/00	***LIN 02 BASELINE REVIEW BOARD***	San Diego, CA

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GEORGE WASHINGTON/SAIPAN Battle Force (02) (D-24)

Accomplishments

Conducted Initial Baseline Review Assessment on 13 July. Results of IBR will be documented in a message due out in two weeks.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
8/00	***WSH 02 PRE DEPLOYMENT PLANNING CONFERENCE***	
9/00	***WSH 02 BASELINE REVIEW BOARD (BRB)***	

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TRUMAN/NASSAU Battle Force (02) (D-30)

Accomplishments

CLF 122250Z JUL 00 announces composition for TRU 02 BG.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
TBD	***TRU 02 PRE-INITIAL BASELINE REVIEW (IBR)***	
TBD	***TRU 02 INITIAL BASELINE REVIEW (IBR)***	
TBD	***TRU 02 PRE-DEPLOYMENT PLANNING CONFERENCE***	
TBD	***TRU 02 BASELINE REVIEW BOARD (BRB)***	

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CONSTELLATION/TARAWA (03) Battle Force (D-29)

Accomplishments

Nothing to report.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
9/14/00	***CON 03 INITIAL BASELINE REVIEW (IBR)***	Crystal City, VA
TBD	***CON 03 PRE DEPLOYMENT PLANNING CONFERENCE***	
TBD	***CON 03 BASELINE REVIEW BOARD (BRB)***	

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NIMITZ (03) D-32

Accomplishments

Nothing to report.

Issues

No issues to report.

Upcoming Events

Date	*Title*	*Location*
10/27/00	***NIMITZ COMBAT SYSTEM SYSTEM OVERHAUL & INSTALLATION***	
12/21/00	***NIMITZ COMBAT SYSTEM TESTING***	

4. Deployed Battle Forces

- **GEORGE WASHINGTON/SAIPAN Battle Force**

  COMGWBATGRU 092210ZJUL 00 SUBJ/COLLABORATION AT SEA (CAS) WEEK THREE STATUS REPORT indicates implementation is progressing well and outlines issues with required actions.

  NIMA RESTON 102215Z JUL 00 non-standard install request is submitted for NIMA Product Server (NPS) automated imagery retrieval system temporary install in SAIPAN and NASSAU to support 26 MEU MED 3-00 and 22 MEU MED 3-01 deployments.

  NORMANDY 050205Z JUL 00 request a Tech. Assist NLT 12 July for SPQ-9A stabilization causality.

- **STENNIS/BONHOMME RICHARD Battle Force** – Nothing to report
- **EISENHOWER/WASP Battle Force -** Nothing to report.

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5. Working Groups

Battle Force Engineering Working Group

Continued efforts with NAVSEA 53 in the development of Battle Force System Engineering/ Interoperability metrics. Completed consolidation of the various draft segment briefings into one master presentation and sent to NAVSEA 53 for review. Coordinated several splinter group meetings throughout the week focused on the development of remaining metric breakdown slides for the master presentation. Also, outlined near term data collection responsibilities within the group. Collection efforts underway in the following areas: D-30 BG Composition, D-30 Configuration Identification, Assessments and D-30 Testing in the BGIT and BGSIT areas.

Produced and distributed the LIN 02 Battle Force Assessment Report in preparation for the BRB scheduled for 18 July. The report has been place on the BFE Website in the assessment directory.

Upcoming Events

Date	*Title*	*Location*
7/18/00	***KERNEL BLITZ (X) WARFIGHTING SEMINAR NUMBER ONE***	USS CORONADO
7/18/00	***SPAWAR VTC (LANTFLT)***	
7/18/00	***AMPHIBIOUS SHIP COMBAT SYSTEM C4I WORKING GROUP & EXEC COMMITTEE MTG***	San Diego, CA
7/19/00	***COMNAVSURFLANT/COMSECONDFLT SCHEDULING CONFERENCE***	Norfolk, VA
7/24/00	***COMTHIRDFLT SERVICE ALLOCATIONS REQUEST FOR Q2 FY 01***	San Diego, CA
7/25/00	***3RD MUW NETWORK CENTRIC WARFARE (NCW) IPT MTG***	Arlington, VA
7/26/00	***JOINT COMMON TIME REF AND JOINT NAVIGATION SYSTEMS ENGR TEAM MTG***	Wash DC
7/28/00	***IN PROCESS REVIEW (IPR)***	Wash, DC
7/31/00	***2000 USCINCPAC SPECTRUM MANAGEMENT CONFERENCE (NO. 1)***	Hawaii
8/1/00	***NAVY STRIKE INTEGRATED PROCESS TEAM (IPT)***	
8/1/00	***SPAWAR VTC (LANT/PACFLT)***	

8/2/00	***NAVAL INTEGRATED INFORMATION NETWORKS (NIIN) IPT MEETING***	Crystal City, VA
8/14/00	***KITTYHAWK (FDNF) - CCIB THAILAND/US***	Hickam AFB
8/15/00	***CFIRM PEARL HARBOR***	Pearl Harbor, HI
8/24/00	***DATA REGISTRATION SYSTEM ENGINEERING TEAM (DR SET) MTG***	TBD
8/25/00	***FBE HOTEL EXECUTION***	
8/29/00	***SPAWAR Fleet N6 C4ISR Familiarization Seminar***	San Diego, CA
9/1/00	***GUN WEAPON SYSTEMS (GWS) OPERATIONAL ADVISORY GROUP (OAG) CONFERENCE***	Norfolk, VA
9/1/00	***CFIRM EVERETT***	Everett, WA
9/11/00	***KITTY HAWK (FDNF) - CCIB US/SINGAPORE***	Honolulu, HI
9/20/00	***PACFLT CV CSR***	
10/1/00	***CFIRM YOKOSUKA***	Yokosuka, Japan
10/9/00	***SC/8 MEETING***	Brussels
10/11/00	***12th MCMFOC***	Panama City, FL
10/16/00	***KITTYHAWK (FDNF) - CCIB US/AUS/NZ***	Washington, DC
10/18/00	***N2 CONFERENCE***	Suitland, MD
10/30/00	***TOMAHAWK OPERATION ADVISORY GROUP (OAG) CONFERENCE***	San Diego, CA
11/14/00	***SPAWAR Fleet N6 C4ISR Familiarization Seminar***	San Diego, CA
11/14/00	***KITTYHAWK (FDNF) - CCIB 00-2 US/ROK***	Seoul, Korea

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SPAWAR Bi-Weekly Teleconference

The next SPAWAR 04F VTC will be held on **Tuesday, 18 July 2000**, at 1000 PDT, and will involve **Atlantic** Fleet commands only. The bulk of the Pacific Fleet participants will be involved in the LINCOLN-BW BRB on 18 July and will be unable to participate. The next combined LANT/PACFLT SPAWAR VTC will be held on Tuesday 01 August.

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Capabilities and Limitations (C&L)

CAPS & LIMS DOCUMENT UPDATES

LINCOLN-TARAWA '00 BF C&L version 2.7.0 (dated 07 July 00) was mailed to distribution.

EISENHOWER-WASP '00 BF C&L version 3.2.0 (dated 30 June 00) was mailed to distribution.

Thirty copies of the (UNCLAS) VINSON-PELELIU '01 BF C&L version 1.0.0 (dated 19 May 00) were mailed to Gray Hawk Systems, Inc., Dahlgren, VA ISO the Korean Data Link Working Group/USFJ JTIDS User Conference (24-28 July at Yokosuka Naval Base).

MEETINGS/PRESENTATIONS

Mr. Alex Schandl attended the CEC TAWG at SWDG, Little Creek, VA. The meeting covered many interoperability issues relevant to KENNEDY-WASP '02 BF (CEC/AEGIS 6 ph1). Mr. Schandl also observed CEC DEP testing from Dam Neck, VA.

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Land Based Testing

Upcoming Events

SPAWAR PMW-159 three weeks of testing in our AEGIS test bed to support CDLMS/C&D testing

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BFI Training

Coordinated with LCDR Bruce Rains USNR for his AT 17-28 July. Talked with LCDR Gary Perkins regarding LCDR Rains proposing a data fusion approach to some of BFI databases.

Shared with LCDR Perkins the TADIL Training Status Matrix and the Training message survey done by CAPT(sel) Dave McDaniel. If LCDR Perkins can see a process that can be documented, he will include training trends to his metrics effort.

Requested update some minor changes to the BFI Training/Qualification Plan

Issues

No issues to report.

Upcoming Events

Title: "AEGIS Integration Course" Sept 5-15, 2000
POC: FCC(SW) Greg Albertson, ATRC N3132 (540) 653-2022, DSN 249

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Combat System Integration Test (CSIT) Configuration Management (CM)

Accomplishments

Port Hueneme Division personnel modified the CCS program to support the new user requirements.

Issues

No issues to report.

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Battle Group Interoperability Test (BGIT) TOR

Accomplishments

Port Hueneme Division personnel coordinated and prepared for working group meetings in support of the Battle Force Trouble Report (BFTR) data warehouse and web site projects. Demonstration of prototype web sites and meetings will be on 13-14 July 2000 in Washington D.C.

Issues

No issues to report.

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PHD NSWC Battle Force Interoperability Engineering and Support
Weekly Report 14 July 2000

Milestone	LIN/TARAWA 00	TRU/NASSAU 00	CON/BOXER 01
D-30 BF Composition Message Promulgated	COMPLETED 141801Z DEC 98 CPF; 191845Z JAN 99 CPF; 202024Z APR 99 CPF; 161626Z JUL 99 CPF, 272240Z DEC 99 CPF	COMPLETED CLF 311201Z DEC 98; CLF 161201Z FEB 99; CLF 261902Z FEB 99; CLF 022120Z SEP 99, CCG 2 072005Z JAN 00, CLF 171805Z MAY 00	COMPLETED 221742Z OCT 98 CPF; 021645Z FEB 99 CPF; 031735Z MAY 99 CPF, 121700Z JUL 99 CPF, 272225Z DEC 99 CPF, 230527Z JAN 00 CPF, 090731Z MAR 00 CPF, 292253Z MAR 00 CPF
D-29 SEA 53 Distributes Proposed Baseline Configuration.	Grandfathered	Grandfathered	Notional: 10/15/98
D-29 Conduct an Assessment in preparation for the Initial Baseline Review	Grandfathered	Grandfathered	COMPLETED PHD NSWC 4L31 report dated 6/3/99
D-28 Initial Baseline Review Meeting	COMPLETED 2/4/99 SEA 05 230528Z DEC 98 , NAVSEA ltr 3090 Ser 05/9019 of 15 Mar 99	COMPLETED 3/25/99 SEA 05 190501Z FEB 99	COMPLETED 12/10/98 NAVSEA ltr 3090 Ser 05/9002 of 6 Jan 99
D-28 Initial Baseline Configuration Message	COMPLETED NAVSEA 020526Z MAR 99	COMPLETED NAVSEA 090526Z APR 99	COMPLETED NAVSEA 05 300527Z JUL 99
D-25 Pre-Deployment Planning Conference	Grandfathered	Grandfathered	Not Applicable
D-25 Conduct an Assessment in preparation for the briefing of the BRB	Grandfathered	Grandfathered	COMPLETED
D-24 SYSCOMs and PEOs Brief BRB at Deployment Planning Conference	Grandfathered	Grandfathered	COMPLETED 10/28/99
D-24 Final Baseline Configuration Message	COMPLETED SPAWAR 291938Z APR 99; SPAWAR 291939Z APR 99	COMPLETED CLF 132024Z MAY 99	COMPLETED CPF 302254Z DEC 99
D-18 SYSCOMs and PEOs Begin Systems Integration Testing	COMPLETED 11/29/99	Not Applicable	Notional: 9/15/99
D-13 SYSCOMs and PEOs Complete Systems Integration Testing	COMPLETED 3/4/00	Notional: 10/28/99	Notional: 2/15/00
D-13 NAVSEA 53 conducts ship FDRR	Grandfathered	Grandfathered	Notional: 2/15/00
D-13 NAVSEA 53 Conducts Final BGIT Readiness Review	COMPLETED 11/23/99 SITREP 10/15/99	COMPLETED 11/23/99 SITREP 10/15/99	COMPLETED 5/12/00 NAVSEA 210525Z APR 00
D-12 SYSCOMs and PEOs Begin BGIT	COMPLETED 1/26/00 NAVSEA 260525Z OCT 99	COMPLETED 1/26/00 260525Z OCT 99 NAVSEA 53	COMPLETED 6/14/00 NAVSEA 090525Z MAR 00
D-10 FLTCINC holds Pre-TCD Conference	COMPLETED 1/20/00	COMPLETED 3/16/00 032359Z MAR 00 CLF	PLANNED 7/10/00 - 7/10/00 SURFPAC 221532Z JUN 00
D-8 Conduct an Assessment in preparation for Preliminary Certification	Grandfathered	Grandfathered	PLANNED 8/10/00 - 8/10/00 BFEWG e-mail 6/21/00
D-7 NAVSEA 53 Produces Preliminary Capabilities and Limitations Document	COMPLETED 10/6/99 Ver 2.02 - 10/5/99	COMPLETED 3/9/00 Ver 2.2.0 - 3/7/00	COMPLETED 12/1/99 Ver 1.0.0 -1/24/99
D-7 NAVSEA 53 Produces Preliminary Battle Force Interoperability Certification	Not Applicable	Not Applicable	Notional: 8/15/00
D-6 TCD	COMPLETED 2/20/00 CPF 101652Z AUG 99	COMPLETED 5/28/00	PLANNED 9/15/00 CPF 121700Z JUL 99
D-3 Conduct an Assessment in preparation for Final Certification	Not Applicable	Not Applicable	Notional: 12/15/00
D-2 NAVSEA 53 Promulgates Final Capabilities & Limitations Document	COMPLETED 4/24/00 Ver 2.4.0 - 4/24/00	COMPLETED 5/31/00 Ver 2.4.0 - 5/31/00	Notional: 1/15/01
D-2 NAVSEA 53 Technically Certifies the BF Ready for Deployment	Not Applicable	Not Applicable	Notional: 1/15/01
D FLTCINC Deploys Battle Force	PLANNED 8/20/00	PLANNED 11/28/00	PLANNED 3/15/01

PHD NSWC Battle Force Interoperability Engineering and Support
Weekly Report 14 July 2000

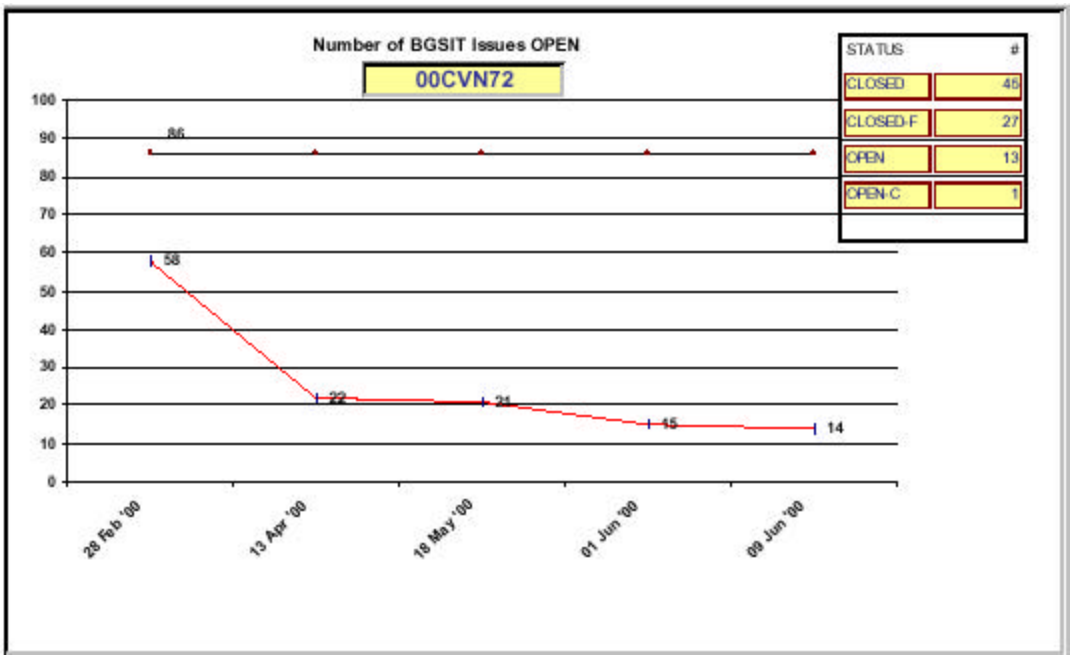
Milestone	ENT/KEARSARGE 01	TR/BATAAN 01	VIN/PELELIU 01
D-30 BF Composition Message Promulgated	COMPLETED CLF 261902Z FEB; CLF 022120Z SEP 99, CLF 171805Z MAY 00	COMPLETED CLF 311201Z DEC 98; CLF 261902Z FEB 99; CLF 022120Z SEP 99; CLF 141425Z OCT 99; CLF 171805Z MAY 00	COMPLETED CPF 021651Z FEB 99; CPF 150240Z MAY 99, CPF 121706Z JUL 99, CPF 201255Z OCT 99, CPF 230518Z JAN 00, CPF 292301Z MAR 00, CPF 251837Z MAY 00, CPF 121841Z JUL 00
D-29 SEA 53 Distributes Proposed Baseline Configuration.	Notional: 11/25/98	Notional: 4/18/99	Notional: 1/15/99
D-29 Conduct an Assessment in preparation for the Initial Baseline Review	COMPLETED PHD NSWC 4L31 report dated 6/29/99	COMPLETED PHD NSWC 4L31 report dated 10/8/99	COMPLETED PHD NSWC 4L31 report dated 6/16/99
D-28 Initial Baseline Review Meeting	COMPLETED 3/26/99 NAVSEA 05 190501Z FEB 99	COMPLETED 7/1/99 SEA 05 230526Z MAR 99; NAVSEA ltr 3090 Ser 05/9080 of 1 Jul 99	COMPLETED 3/26/99 NAVSEA 05 190501Z FEB 99; NAVSEA ltr 3090 Ser 05/9044 of 4 May 99
D-28 Initial Baseline Configuration Message	COMPLETED NAVSEA 05 110527Z MAY 99, SPAWAR 302345Z JUL 99	COMPLETED SEA 05 280526Z JUN 99, SPAWAR 012345Z SEP 99, SPAWAR 012346Z SEP 99	COMPLETED NAVSEA 050526Z MAY 99
D-25 Pre-Deployment Planning Conference	COMPLETED 10/22/99 CLF 122047Z AUG 99	COMPLETED 10/12/99 CLF 292248Z SEP 99	Not Applicable
D-25 Conduct an Assessment in preparation for the briefing of the BRB	Grandfathered	COMPLETED	COMPLETED
D-24 SYSCOMs and PEOs Brief BRB at Deployment Planning Conference	COMPLETED 10/22/99	COMPLETED 10/20/99 CLF 112343Z AUG 99	COMPLETED 10/28/99
D-24 Final Baseline Configuration Message	COMPLETED CLF 152357Z DEC 99	COMPLETED CLF 301311Z NOV 99, CLF 301313Z NOV 99	COMPLETED CPF 302342Z DEC 99, CPF 302341Z DEC 99
D-18 SYSCOMs and PEOs Begin Systems Integration Testing	Notional: 10/25/99	Notional: 3/18/00	Notional: 12/15/99
D-13 SYSCOMs and PEOs Complete Systems Integration Testing	Notional: 3/25/00	Notional: 8/18/00	Notional: 5/15/00
D-13 NAVSEA 53 conducts ship FDRR	Notional: 3/25/00	Notional: 8/18/00	Notional: 5/15/00
D-13 NAVSEA 53 Conducts Final BFIT Readiness Review	COMPLETED 5/12/00 NAVSEA 210525Z APR 00	PLANNED 11/1/00 Notional BGIT Schedule 3/21/00	PLANNED 7/26/00 NAVSEA 130525Z JUL 00
D-12 SYSCOMs and PEOs Begin BFIT	COMPLETED 6/14/00 NAVSEA 090525Z MAR 00	PLANNED 11/6/00 - 12/6/00 Notional BGIT Schedule 3/21/00	PLANNED 8/7/00 - 8/30/00 NAVSEA 130525Z JUL 00
D-10 FLTCINC holds Pre-TCD Conference	PLANNED 8/30/00 - 8/30/00 CLF 141716Z JUL 00	Notional: 11/18/00	Notional: 8/15/00
D-8 Conduct an Assessment in preparation for Preliminary Certification	PLANNED 8/25/00 BFEWG e-mail 6/21/00	Notional: 1/18/01	Notional: 10/15/00
D-7 NAVSEA 53 Produces Preliminary Capabilities and Limitations Document	COMPLETED 3/9/00 Ver 1.1.0 - 3/8/00	COMPLETED 5/9/00 Ver 1.1.0 - 5/8/00	COMPLETED 4/13/00 Ver 1.2.0 - 4/12/00
D-7 NAVSEA 53 Produces Preliminary Battle Force Interoperability Certification	Notional: 9/25/00	Notional: 2/18/01	Notional: 11/15/00
D-6 TCD	PLANNED 10/25/00 CLF 022120Z SEP 99	PLANNED 3/18/01 CLF 022120Z SEP 99	PLANNED 12/15/00 CPF 121706Z JUL 99
D-3 Conduct an Assessment in preparation for Final Certification	Notional: 1/25/01	Notional: 6/18/01	Notional: 3/15/01
D-2 NAVSEA 53 Promulgates Final Capabilities & Limitations Document	Notional: 2/25/01	Notional: 7/18/01	Notional: 4/15/01
D-2 NAVSEA 53 Technically Certifies the BF Ready for Deployment	Notional: 2/25/01	Notional: 7/18/01	Notional: 4/15/01
D FLTCINC Deploys Battle Force	PLANNED 4/25/01	PLANNED 9/18/01	PLANNED 6/15/01

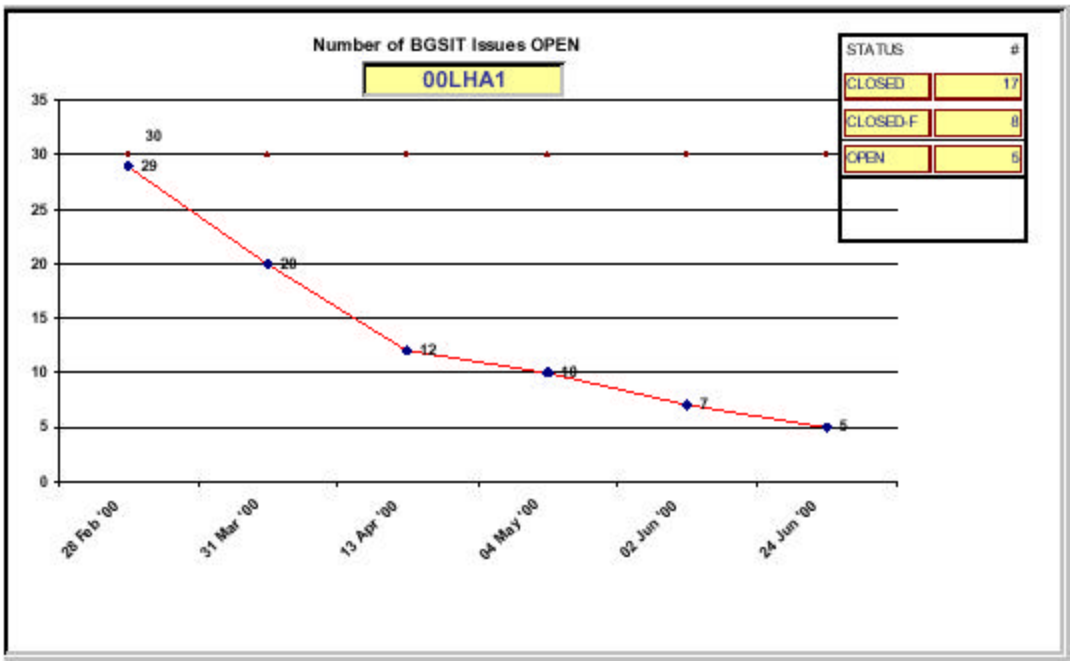
PHD NSWC Battle Force Interoperability Engineering and Support
Weekly Report 14 July 2000

Milestone	STN/BONHOMME RICHARD 02	JFK/WASP 02	LIN/BELLEAU WOOD 02
D-30 BF Composition Message Promulgated	COMPLETED CPF 061708Z JUL 99, CPF 151700Z NOV 99, CPF 251934Z MAY 00, CPF 071900Z JUN 00	COMPLETED CLF 022120Z SEP 99, CLF 171805Z MAY 00	COMPLETED CPF 241942Z NOV 99; CPF 161745Z FEB 00
D-29 SEA 53 Distributes Proposed Baseline Configuration.	COMPLETED 190501Z OCT NAVSEA 53	COMPLETED 070535Z DEC 99 NAVSEA 53, 171700Z DEC 99 SPAWAR	Notional: 1/15/00
D-29 Conduct an Assessment in preparation for the Initial Baseline Review	COMPLETED PHD NSWC 4L31 report dated 8/30/99	COMMENCED	COMPLETED 2/28/00 PHD NSWC 4L31 report dated 02/28/00
D-28 Initial Baseline Review Meeting	COMPLETED 9/23/99 NAVSEA 05 200525Z JUL 99, NAVSEA 05 270525Z JUL 99	COMPLETED 11/17/99	COMPLETED 3/2/00 NAVSEA 170501Z DEC 99
D-28 Initial Baseline Configuration Message	COMPLETED SPAWAR 282340Z DEC 99; SPAWAR 282341Z DEC 99; SPAWAR 282342Z DEC 99, NAVSEA 190501Z OCT 99	COMPLETED NAVSEA 070535Z DEC 99	COMPLETED NAVSEA 140502Z APR 00; NAVSEA 140501Z APR 00; NAVSEA 140500Z APR 00
D-25 Pre-Deployment Planning Conference	COMPLETED 1/27/00	COMPLETED 1/25/00 CLF 142245Z JAN 00	COMPLETED 5/17/00
D-25 Conduct an Assessment in preparation for the BRB briefing	COMPLETED 1/26/00	COMPLETED 2/26/00	PLANNED 6/12/00 BFEWG e-mail 6/21/00
D-24 SYSCOMs and PEOs Brief BRB at Deployment Planning Conf	COMPLETED 3/15/00	COMPLETED 2/23/00 CLF 101525Z FEB 00	PLANNED 7/18/00 CPF 071928Z JUN 00
D-24 Final Baseline Configuration Message	Notional: 1/15/00	COMPLETED CLF 041311Z APR 00; CLF 041313Z APR 00	Notional: 6/15/00
D-18 SYSCOMs and PEOs Begin Systems Integration Testing	Notional: 7/15/00	Notional: 8/7/00	Notional: 12/15/00
D-13 SYSCOMs and PEOs Complete Systems Integration Testing	Notional: 12/15/00	Notional: 1/7/01	Notional: 5/15/01
D-13 NAVSEA 53 conducts ship FDRR	Notional: 12/15/00	Notional: 1/7/01	Notional: 5/15/01
D-13 NAVSEA 53 Conducts Final BFIT Readiness Review	PLANNED 2/14/01 Notional BGIT Schedule 3/21/00	Notional: 1/7/01	Notional: 5/15/01
D-12 SYSCOMs and PEOs Begin BFIT	PLANNED 2/20/01 - 3/14/01 Notional BGIT Schedule 3/21/00	PLANNED 2/5/01 - 3/21/01 Sitrep Input 3/10/00	Notional: 6/15/01
D-10 FLTCINC holds Pre-TCD Conference	Notional: 3/15/01	Notional: 4/7/01	Notional: 8/15/01
D-8 Conduct an Assessment in preparation for Preliminary Certification	Notional: 5/15/01	Notional: 6/7/01	Notional: 10/15/01
D-7 NAVSEA 53 Produces Preliminary Capabilities and Limitations Document	Notional: 6/15/01	Notional: 7/7/01	Notional: 11/15/01
D-7 NAVSEA 53 Produces Preliminary Battle Force Interoperability Certification	Notional: 6/15/01	Notional: 7/7/01	Notional: 11/15/01
D-6 TCD	PLANNED 7/15/01 CPF 061708Z JUL 99	PLANNED 8/7/01 CLF 022120Z SEP 99	PLANNED 12/15/01 CPF 241942Z NOV 99
D-3 Conduct an Assessment in preparation for Final Certification	Notional: 10/15/01	Notional: 11/7/01	Notional: 3/15/02
D-2 NAVSEA 53 Promulgates Final Capabilities & Limitations Document	Notional: 11/15/01	Notional: 12/7/01	Notional: 4/15/02
D-2 NAVSEA 53 Technically Certifies the BF Ready for Deployment	Notional: 11/15/01	Notional: 12/7/01	Notional: 4/15/02
D FLTCINC Deploys Battle Force	PLANNED 1/15/02	PLANNED 2/7/02	PLANNED 6/15/02

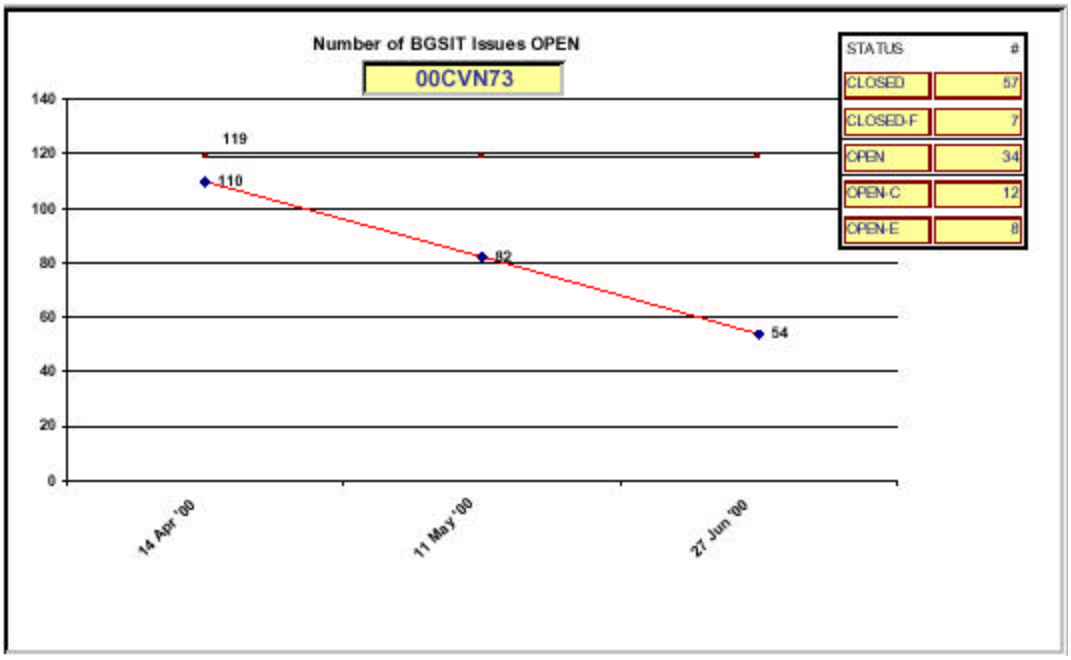
PHD NSWC Battle Force Interoperability Engineering and Support
Weekly Report 14 July 2000

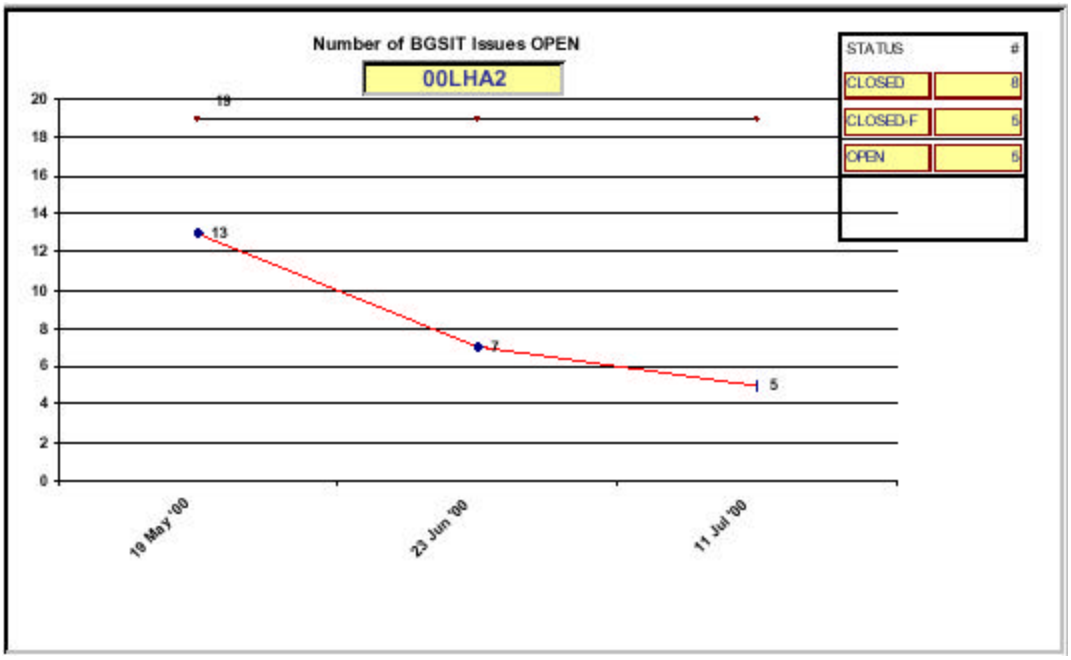
Milestone	WSH/SAIPAN 02	TRU/NASSAU 02	CON /TARAWA 03
D-30 BF Composition Message Promulgated	COMPLETED CLF 171805Z MAY 00	COMPLETED CLF 122250Z JUL 00	COMPLETED CPF 271806Z JUN 00
D-29 SEA 53 Distributes Proposed Baseline Configuration.	Notional: 2/1/00	Notional: 7/10/00	Notional: 9/1/00
D-29 Conduct an Assessment in preparation for the IBR	PLANNED 7/7/00 BFEWG e-mail 6/21/00	Notional: 7/10/00	Notional: 9/1/00
D-28 Initial Baseline Review Meeting	COMPLETED 7/13/00 NAVSEA 240501Z MAY 00	Notional: 8/10/00	PLANNED 9/14/00 NAVSEA 110501Z JUL 00
D-28 Initial Baseline Configuration Message	Notional: 3/1/00	Notional: 8/10/00	Notional: 10/1/00
D-25 Pre-Deployment Planning Conference	Notional: 8/1/00	Notional: 11/10/00	Notional: 1/1/01
D-25 Conduct an Assessment in preparation for the briefing of the BRB	Notional: 8/1/00	Notional: 11/10/00	Notional: 1/1/01
D-24 SYSCOMs and PEOs Brief BRB at Deployment Planning Conference	Notional: 9/1/00	Notional: 12/10/00	Notional: 2/1/01
D-24 Final Baseline Configuration Message	Notional: 9/1/00	Notional: 12/10/00	Notional: 2/1/01
D-18 SYSCOMs and PEOs Begin Systems Integration Testing	Notional: 1/1/01	Notional: 6/10/01	Notional: 8/1/01
D-13 SYSCOMs and PEOs Complete Systems Integration Testing	Notional: 6/1/01	Notional: 11/10/01	Notional: 1/1/02
D-13 NAVSEA 53 conducts ship FDRR	Notional: 6/1/01	Notional: 11/10/01	Notional: 1/1/02
D-13 NAVSEA 53 Conducts Final BFIT Readiness Review	Notional: 6/1/01	Notional: 11/10/01	Notional: 1/1/02
D-12 SYSCOMs and PEOs Begin BFIT	Notional: 7/1/01	Notional: 12/10/01	Notional: 2/1/02
D-10 FLTCINC holds Pre-TCD Conference	Notional: 9/1/01	Notional: 2/10/02	Notional: 4/1/02
D-8 Conduct an Assessment in preparation for Preliminary Certification	Notional: 11/1/01	Notional: 4/10/02	Notional: 6/1/02
D-7 NAVSEA 53 Produces Preliminary Capabilities and Limitations Document	Notional: 12/1/01	Notional: 5/10/02	Notional: 7/1/02
D-7 NAVSEA 53 Produces Preliminary Battle Force Interoperability Certification	Notional: 12/1/01	Notional: 5/10/02	Notional: 7/1/02
D-6 TCD	PLANNED 1/10/02 CLF 171805Z MAY 00	PLANNED 6/10/02 - 6/10/02 CLF 122250Z JUL 00	PLANNED 7/15/02 CPF 271806Z JUN 00
D-3 Conduct an Assessment in preparation for Final Certification	Notional: 4/1/02	Notional: 9/10/02	Notional: 11/1/02
D-2 NAVSEA 53 Promulgates Final Capabilities & Limitations Document	Notional: 5/1/02	Notional: 10/10/02	Notional: 12/1/02
D-2 NAVSEA 53 Technically Certifies the BF Ready for Deployment	Notional: 5/1/02	Notional: 10/10/02	Notional: 12/1/02
D FLTCINC Deploys Battle Force	PLANNED 7/10/02	Notional: 12/10/02	PLANNED 1/15/03





Closed	Closed by responsible activity and concurred with by BGSIT CINCPAC/LANT
Closed F	Closed prior to distribution of HOTWASH message.
Open	No adequate resolution has been accomplished for issue.
Open C	Issue is open but equipment/program is in a caretaker status and a fix will not be funded.
Open E	Correction is known but will not be available prior to BG deployment.





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*ADD ".SMIL" FOR SIPRNET

TAB E

Key Systems Information

RADAR 2 D

- AN/SPS-40
- AN/SPS-49(V)1 MPU
- MK-23 TAS RDR 2D

RADAR 3D

- AN/SPS-48E (V) RDR 3D
- AN/SPY-1

IFF

- AN/UPX-28
- AN/UPX-29(V) CIS
- AN/UPX-24(V)
- AN/UPX-36(V)3 CIFF
- AUTO ID
- CV-2356 (BVP)
- AN/UPX-34A(V) SARTIS

RADAR CORRELATION

- AN/SYS-2(V) 2 IADT
- AN/USG-2(V) (CETPS) (CEC)
- RVP (UYK 20)

SURFACE SEARCH RADARS

- AN/SPS-64
- AN/SPS-67
- AN/SPQ-9

AIR CONTROL

- AN/SPN-41
- AN/SPN-43
- AN/TPX-42
- AN/SPN-35B

COMMAND & CONTROL

- ACDS
- AWS
- CDS
- TAMPS
- AN/KSQ-1 AADS
- AN/USQ-135 PLRS
- AN/USQ-90 PLRS
- EPLRS
- SSDS
- TDSS (New)

TACTICAL DATA LINKS

- TADIL
- LINK 11
- LINK 4
- LINK 16
- S-TADIL J
- ADSI (New)

LINK COORDINATION

- C2P (Command & Control Processor)
- CDLMS
- SGS/AC (New)

INTELLIGENCE

- BGPHES
- GBS
- BINOCULAR
- CHBDL-ST
- CTT
- JTT
- JSIPS-N
- JWICS
- JSTARS
- TACINTEL
- TRAP
- TIBS
- TRIXS
- RADIANT MERCURY

COMMUNICATIONS

- ADNS
- JMCS SLICE
- AN/WSC-6
- TADIXS
- SINCGARS

AN/SPS-40 B/C/D w/DMTI

The AN/SPS-40 2D Air Search Radar provides target detection and tracking for long range surveillance, self defense, and fire control system designation. The AN/SPS-40 exploits the advantages of target detection at UHF band through state-of-the-art signal processing techniques. The solid state design and use of commercial off the shelf processor technology provide high performance and reliability at an affordable price. Key features include: low observable target detection; low vulnerability to Anti-Radiation Missiles (ARMs); impervious to weather clutter and chaff, excellent range resolution for multiple missile raids; exceptional improvement factor for overland/high sea state detection, and optional doppler processor for quick reaction track establishment and false track reduction

AN/SPS-40E

AN/SPS-49(V) 1 MPU

AN/SPS-49(V)5

The Radar Set AN/SPS-49 is a long-range, two-dimensional, air-search radar system that provides contact range and bearing information to be displayed on consoles/workstations. The AN/SPS-49 uses a line-of-sight, horizon-stabilized antenna to provide acquisition of low-altitude targets in all sea states. The AN/SPS-49 has several operational features to allow optimum radar performance: an automatic target detection capability with pulse doppler processing and clutter maps, assuring reliable detection in normal and severe types of clutter; an electronic counter-countermeasures capability for jamming environments; a moving target indicator capability to distinguish moving targets from stationary targets and to improve target detection during the presence of clutter and chaff; and a coherent side lobe cancellation feature.

AN/SPS-49(V) 5 RADAR MPU

The AN/SPS-49(V)5 Radar Medium PRF Upgrade (MPU) is a technical improvement to provide new and modified Circuit Card Assemblies (CCAs), backplanes, and other components in the receiver to reduce the number of false contacts being sent by the radar to the rest of the combat system without reducing the radar's sensitivity to small, low, close-in contacts. The increased detection capability of the SPS-49(V)5 over earlier variants overloaded the AN/SYS-2(V)1 aboard the USS MAHAN with false targets. The MPU upgrade was developed to correct this for LHD 1-4.

AN/SPS-49(V) 6 TO (V)7 UPGRADE

Replaces the AN/SPS-49(V)6 air search radar with the AN/SPS-49(V)7 version. The (V)7 version provides automatic Target Detection (ATD) versus manual tracking in the (V) 6 version. ATD was developed for the Navy's New Threat Upgrade (NTU) program to provide a fast reaction capability to the Combat Direction System (CDS). This radar provides excellent detection in clutter and jamming environments with a low false alarm

rate. At the time of installation, the AN/SPS-49(V)7 will be integrated with AEGIS so it functions in a Manual Initiate Automatic Track (MIAT) mode. An embedded processor will be installed in the signal data processor cabinet of the AN/SPS-49(V)7. This processor will accept manual initiate orders from the C&D console or computer and automatically send smooth 2-D radar track data to the C&D track. An interface cable to the C&D computer will also be required. The hardware changes include Field Changes to the radar receiver and signal data processor.

MK-23/7 Target Acquisition System (TAS)

The Target Acquisition System (TAS) Mk 23 is a detection, tracking, identification, threat evaluation, and weapon assignment system designed especially for use against high-speed, small cross-section targets which approach the ship either from over-the-horizon at very low altitudes or from very high altitudes at near vertical angles. The TAS integrates a medium-range, two-dimensional, air-search radar subsystem; an IFF subsystem (covered in a separate paragraph); a display subsystem; and a computer subsystem to provide automatic/manual target detection and tracking, target identification, threat evaluation, and weapon assignment capabilities for engagement of air tracks. This version of the TAS includes a second display console to assist in the managing of track data.

AN/SPS-48E (V)

AN/SPY-1 Radar

The AN/SPY-l radar system is the primary air and surface radar for the Aegis Combat System installed in the Ticonderoga (CG-47) and Arleigh Burke (DDG-51)-class warships. It is a multi-function phased-array radar capable of search, automatic detection, transition to track, tracking of air and surface targets, and missile engagement support.
A conventional, mechanically-rotating radar "sees" a target when the radar beam strikes that target once during each 360 degree rotation of the antenna. A separate tracking radar is then required to engage each target. By contrast, the computer-controlled AN/SPY-1A Phased Array Radar of the AEGIS system brings these functions together within one system. The four fixed arrays of "SPY" send out beams of electromagnetic energy in all directions simultaneously, continuously providing a search and tracking capability for hundreds of target at the same time.
The SPY-1 radar program began in the early 1970s as part of the AEGIS weapon system development and acquisition process. Three versions of the radar have been delivered.

- The first radar of the SPY-1 series, **SPY-1A**, is installed in the First AEGIS Cruiser, USS TICONDEROGA (CG 47), and subsequent ships until USS PHILIPPINE SEA (CG 58).
- As technology improved, the development program fielded a new version of SPY-1. This new radar is the **SPY-1B** and, with its upgrade the SPY-1B(V),

was built into USS PRINCETON (CG-59) and the remaining AEGIS cruisers. CG-59 through CG-73 are equipped with the SPY-1B.

- USS ARLEIGH BURKE (DDG 51) class ships, AEGIS destroyers, received the **SPY-1D**, the latest generation of the SPY-1 family. SPY-1D is a variant of the SPY-1B radar system on later TICONDEROGA (CG-47) class cruisers, tailored for a destroyer-sized ship.

The SPY-1D(V) radar upgrade is the newest improvement to the SPY-1D. The SPY-1D(V) littoral radar upgrade will supersede the SPY-1D in new-construction ships beginning in FY 1998, and will deploy in DDG 51 Flight IIA ships starting in approximately 2003. The third variant of this radar, known as the Littoral Warfare Radar, will improve the radar's capability against low-altitude, reduced radar cross-section targets in heavy clutter environments and in the presence of intense electronic countermeasures. The SPY-1D radar system is the multi-function, phased-array, three-dimensional (range, altitude, and bearing) radar which conducts search, automatic detection, and tracking of air and surface targets. The SPY-1D also provides mid-course guidance for the SM-2 missile, and has also demonstrated a capability to track theater ballistic missiles. The AN/SPY-1D(V), under development for installation in some Flight IIA ships, is an improved system with better performance against targets in clutter, additional moving target indicator (MTI) waveforms, and greater ability to counter deceptive Electronic Attack measures.

AN/UPX-28(V)2 Transponder Set

The Transponder Set AN/UPX-28 is an AIMS Mk XII IFF system that receives interrogation signals from air, surface and land IFF-equipped units and automatically replies with a coded response signal that provides ownship identification. The AN/UPX-28 receives, decodes and responds to the characteristic interrogations of operational modes 1, 2, 3A, C and 4. Special coded identification of position and emergency signals may be transmitted to interrogating stations when conditions warrant. The range of the AN/UPX-28 is limited to line-of-sight transmission since its frequency of operation is in the UHF band. The AN/UPX-28 integrates most below-deck transponder components into a single unit, which includes controls and indicators to permit control and monitoring of the transponder operations.

AN/UPX-29(V) Interrogator System

The Interrogator System AN/UPX-29 is a centralized AIMS MK XII IFF system that employs a challenge and reply technique to distinguish friendly platforms in a multi-target environment. This is accomplished by the AN/UPX-29 generating identity queries on specific or general targets and processing target responses to obtain identification. An electronically-steered antenna (ESA), which is independent of a radar antenna, is employed to provide for immediate interrogations of pop-up targets. Since an electronically-steered antenna is used, the AN/UPX-29 is not dedicated to be used with any one particular radar system.

AN/UPX-36(V)() Central IFF for Ship Defense System

The Central IFF for Ship Defense (CIFF-SD) System AN/UPX-36(V) is a centralized, controller processor-based, AIMS MK XII IFF system that associates different sources of target information such as IFF and SSDS track files. The CIFF-SD System accepts composite video returns from shipboard IFF sensors; processes and centroids the individual sensor signals; correlates and combines IFF sensor inputs into one IFF track picture; associates IFF contacts with local and composite tracks; and provides track data to, and receives composite track updates from, the Multi-Function Computer Plant (MFCP). CIFF-SD controls the interrogations of each IFF system on a track-selective basis as well as continually in designated sectors. CIFF-SD LAN Access Unit (LAU) is capable of operating in the simulation and playback modes to support training. CIFF-SD can operate in the diagnostic mode when the interface with the MFCP cannot be established or is disabled. CIFF-SD also provides the means to interface to a keyboard/display terminal for the purpose of entering parametric data for system set-up and trouble-shooting.

AUTO ID

There are three principal automatic identification systems that exist in the Navy: CV AUTO ID, CEC-Composite ID (Comp ID), and AEGIS ID Doctrine. The CV AUTO ID and Comp-ID systems are very similar in design (they have common roots and share their similarities with the SSDS ID system which, current, is not aboard any Link capable units). The AEGIS system is more limited than the CV Auto ID/Comp-ID system. In particular, the Aegis system makes it difficult to use airways and geopolitical boundaries as criteria for automatically assigning ID.

In addition to these three "programmable" ID systems, other combat systems may automatically assign ID and, though their systems are designed for self defense, the ID implications can be felt force-wide. All three systems allow operators to establish geographic "areas" and associate with each area a set of criteria (or "rules") tracks must meet in order to have their identification automatically changed by the host TDS. In all cases, generally, these criteria consist of altitude, speed, and/or IFF/SIF of the track. In all cases, the systems will process local and mutual tracks, not remote tracks; if the unit holds the track with local sensors, it will be processed.

The systems differ in the degree of control they allow over the automatic assignment of ID. Overall, CV AUTO ID and Comp ID are more capable systems. AEGIS allows areas to be defined as sectors or rectangles that can be slaved to system tracks if desired. CV AUTO ID and Comp ID also allow for this and, in addition, allow complex, operator drawn geometric shapes and more importantly, pre-defined geopolitical boundaries and airways. Additionally, CV AUTO ID can assign any ID. AEGIS will not assign an ID of FRIEND or HOSTILE. AEGIS can only assign an ID of FRIEND automatically if a valid Mode 4 IFF is received from a track. Finally, AEGIS ID ties a single rule to a single area; up to eight can be active simultaneously. CV AUTO ID, on the other hand, allows essentially an unlimited number of areas with essentially an unlimited number of rules tied to each area.

AN/SYS-2 Integrated Automatic Detection and Tracking (IADT)

The Integrated Automated Detection and Tracking (IADT) System AN/SYS-2 is a computer-based radar data processor with automated radar target detection, tracking, and correlation capabilities. The AN/SYS-2 correlates contact data from the 2-D and 3-D air-search RADARS to provide a single, unduplicated, highly-accurate, surveillance picture output in various operational environments, including clutter and electronic countermeasures. The AN/SYS-2 accomplishes this by taking advantage of the mutually supporting aspects of the 2-D and 3-D RADARS surveillance volume of coverage and by exploiting their special modes of radar operation. The AN/SYS-2 is designed to enhance significantly the effectiveness of the combat system by reducing reaction time, improving threat assessment, providing earlier warning, and providing a prompt and reliable detection capability in the presence of high target density and electronic countermeasures.

Cooperative Engagement Capability (CEC)

AN/USG-2(V) Cooperative Engagement Transmission Processing Set

Cooperative Engagement Capability (CEC) brings revolutionary new capability to air defense, not by adding new RADARS or weapon systems, but by distributing sensor and weapons data from existing systems in a new and significantly different manner. Cooperative Engagement Capability is being developed by Applied Physics Laboratory in conjunction with Lockheed Martin. With CEC, data from each unit is distributed to all other units, filtered, and combined using identical algorithms into a single, common air picture. Each CEC unit combines ownship radar measurement data with those from all other CEC units using the same CEC algorithms. The result is an air picture based on all the data available (thus superior to that of any single sensor), providing tracks with identical track numbers throughout the net. CEC distributes radar measurement data (not tracks) from each CEC unit to all other CEC units.

AN/SPS-64(V)9 SURFACE SEARCH RADAR

The Radar Set AN/SPS-64(V)9 is a short-range, two-dimensional, surface-search/navigation radar system that provides contact range and bearing information. The AN/SPS-64's surface-search function provides short-range detection and surveillance of surface units and low-flying air units, while the AN/SPS-64's navigation function enables quick and accurate determination of ownship position relative to nearby vessels and navigational hazards. The AN/SPS-64 includes its own display indicator, which is capable of displaying radar contacts from the AN/SPS-64 radar or other shipboard radars.

AN/SPS-67 SURFACE SEARCH RADAR

The Radar Set AN/SPS-67 is a short-range, two-dimensional, surface-search/navigation radar system that provides highly accurate surface and limited low-flyer detection and tracking capabilities. The AN/SPS-67 is a solid-state replacement for the AN/SPS-10 radar, using the same antenna but incorporating standard electronic module technology for simpler repair and maintenance. The AN/SPS-67 provides excellent performance against rain and

sea clutter, and is useful in harbor navigation, since the AN/SPS-67 is capable of detecting buoys and small obstructions without difficulty.

AN/SPQ-9B Radar

The AN/SPQ-9 Surface Surveillance and Tracking Radar, is a track-while-scan radar used with the MK-86 Gunfire Control system on surface combatants. The AN/SPQ-9B detects sea skimming missiles at the horizon even in heavy clutter while simultaneously providing detection and tracking of surface targets and beacon responses. The AN/SPQ-9B is available as a stand-alone radar or as a replacement for the AN/SPQ-9 in the Mk 86 Gun Fire Control System, which will be integrated into the Mk 1 Ship Self Defense System (SSDS).

Deployment
The AN/SPQ-9B is slated to be installed on ships and aircraft carriers in the following classes:

- CG-47 TICONDEROGA-class cruisers
- LHD-1 amphibious ships
- LPD-17 SAN ANTONIO-class amphibious ships
- DD-963 SPRUANCE-class destroyers
- DDG-51 destroyers
- CVN-68 NIMITZ-class aircraft carriers

AN/SPN-41

The Transmitting Set AN/SPN-41A is an electronic landing aid that provides proper flight path data to an approaching aircraft as the aircraft flies into range of ownship radar landing system or into visual contact with ownship optical landing system. The AN/SPN-41A has two separate transmitters (azimuth and elevation) with individual antennas used for sector scanning.

AN/SPN-43C

The Radar Set AN/SPN-43C is a two-dimensional, air traffic control, air-surveillance radar system that provides for simultaneous control and identification of aircraft within ownship area of responsibility. The AN/SPN-43C has two sets of transmitters (modulators), receivers, and their associated power supplies; the second set provides an immediate on-line backup capability in case of either a transmitter or receiver equipment failure. The AN/SPN-43C is used in conjunction with the AATC DAIR system for the marshalling and tactical deployment of aircraft. The AN/SPN-43C is also used in conjunction with the carrier-controlled-approach radar for aircraft landing operations. In addition to the above, the AN/SPN-43C serves as a backup short-range, air-search radar system.

AN/TPX-42A (V) 13

The Interrogator Set AN/TPX-42A (V) 13 commonly referred to as AATC DAIR, is an automatic beacon and radar tracking system that provides safe, terminal air space control of aircraft operations in an amphibious assault environment. Although the IFF system is the primary means of identifying aircraft, the AN/TPX-42A also processes a radar data source for the detection and tracking of targets. The AN/TPX-42A automatically tracks Mode 1, 2, 3/A and C equipped aircraft and provides the air traffic controllers with an alphanumeric display of aircraft identity, altitude, and other amplifying data which is superimposed over the appropriate radar video on the plan position indicator consoles. This system is also capable of processing and displaying flight plans, geographic reference points, and map lines for easy association with mission operations. The AN/TPX-42A utilizes the AN/SPN-43C radar as the primary source of radar data.

AN/SPN-35B

The Aircraft Control Approach Central AN/SPN-35B is a short-range, three-dimensional, carrier-controlled-approach radar system used for precision landing approaches during adverse weather conditions. The AN/SPN-35B may also be used for height-finding and radar surveillance of aircraft. The AN/SPN-35B displays both azimuth and elevation data on a radar control-indicator enabling the radar operator to direct the aircraft pilot along a predetermined glide path and azimuth course line to a carrier-controlled-approach optical landing system transition point one mile from ownship.

Advanced Combat Direction System (CDS) AN/SYQ-20

The Combat Direction System (CDS) AN/SYQ-20 is a tactical computer, display and switching system that provides the means for rapidly collecting, displaying, evaluating, and disseminating information regarding the constantly changing tactical environment. Using data provided by the other shipboard systems, link acquired data, and operator entered data, the CDS correlates and maintains the real-time tactical picture for support of command and control tactical decision making. The CDS also provides the means for controlling the combat system configuration, monitoring the combat system operational status, and controlling the weapon system engagement process. This CDS is based on the Standard Display System AN/UYQ-21.

AN-SYQ-21 Tactical Automated Mission Planning System (TAMPS)

TAMPS is a computerized method of planning and optimizing mission routes against hostile targets. TAMPS is employed extensively by embarked Navy air wings and Marine Corps aviation units to provide planners a common automated system for rapidly processing large quantities of digitized terrain, threat and environmental data, aircraft, avionics, and weapon systems parameters. TAMPS core software provides flexible interfaces to a wide variety of USN and USMC C4I systems to provide users near-real-time updates to weather and intelligence databases.

Advanced Amphibious Assault Direction System AN/KSQ-1

Amphibious Assault Direction System (AADS) AN/KSQ-1 command and control data system that provides real-time information to the Amphibious Command Ship (ACS), Primary Control Ship (PCS), and the Secondary Control Ship (SCS) on the position and movement of Naval surface landing craft in the Amphibious Task Force (ATF). The AN/KSQ-1 will allow ACS/PCS/SCSs to identify, track, communicate with, and control amphibious landing craft from launch through transit Over-The-Horizon (OTH), off-coast, and return while conducting maneuver warfare from the sea. The AADS will provide positional information on all amphibious Participating Units (PUs), means to disseminate navigational information, means to utilize existing secure voice radio relay system(s) that extend surface-to-shore control nets beyond the line of sight, digital communications link for exchanging preformatted messages among PUs, and interoperability with Position Location Reporting Systems (PLRSs). The AADS provides cryptographic security and anti-jam capability.

AN/USQ-135(V)2 Position Location Reporting System

The Position Location Reporting System (PLRS) AN/USQ-135 is an automated tactical data system that provides accurate, timely, three-dimensional position location, navigation and identification information to the PLRS-equipped units under all conditions of weather and visibility. The AN/USQ-135 is a secure, jam-resistant system with built-in methods of limiting access on a need-to-know basis and for minimizing possible system compromise. The AN/USQ-135 receives data from lightweight manpack, landing craft, airborne, and vehicle-mounted radio sets called "user units" and converts the data to a graphic-display presentation of individual unit location and identification. The AN/USQ-135 provides the landing force command with the capability to accurately monitor landing force operation until facilities and equipment ashore can support command and control requirements. The PLRS data is provided to all authorized PLRS users on request via PLRS user units. The user units are provided to selected units down to infantry platoons, landing craft and individual aircraft.

AN/USQ-90(V)2 Position Location Reporting System

The Position Location Reporting System (PLRS) AN/USQ-90 is an automated tactical data system that provides accurate, timely, three-dimensional position location, navigation and identification information to the PLRS-equipped units under all conditions of weather and visibility. The AN/USQ-90 is a secure, jam-resistant system with built-in methods of limiting access on a need-to-know basis and for minimizing possible system compromise. The AN/USQ-90 receives data from lightweight manpack, landing craft, airborne, and vehicle-mounted radio sets called "user units" and converts the data to a graphic-display presentation of individual unit location and identification. The AN/USQ-90 provides the landing force command with the capability to accurately monitor landing force operation until facilities and equipment ashore can support command and control requirements. The PLRS data is provided to all authorized PLRS users on request via PLRS user units. The user units are provided to selected units down to infantry platoons, landing craft and individual aircraft.

EPLRS
TBD

MK-1 Ship Self Defense System [SSDS]

The Ship Self-Defense System (SSDS) is the first integration and control element of existing shipboard sensors and weapons to provide Quick Reaction Combat Capability (QRCC) to protect non-Aegis ships. SSDS provides a Local Area Network (LAN), LAN Access Units (LAUs), computer programs, and operator stations to provide an automated, quick response, multi-target engagement capability against anti-ship cruise missiles.

(New)Tactical Decisions Support System (TDSS)

The Tactical Decisions Support System (TDSS), AN/USQ-132(V) is an automated system that can provide a real-time multi-source integrated tactical picture and Tactical Decision Aids (TDAs). The TDSS provides an automated means to collect, fuse, assimilate, display, evaluate, manipulate, and disseminate tactical data, and to use this data to support the decision making process in non-AAW mission areas. The TDSS generates and maintains a geographically referenced tactical plot, processes contact and target motion analysis data, maintains an environmental sensor display, provides nomogram and reference support as well as interface and database processing. The TDSS collects and processes information from both on-board and off-board sources

LINKS

Tactical Digital Information Links (TADIL)

Tactical data links involve transmissions of bit-oriented digital information which are exchanged via data links known as Tactical Digital Information Links (TADIL). A TADIL is a Joint Chiefs of Staff (JCS) approved standardized communication link suitable for transmission of machinereadable, digital information. The United States Navy uses the NATO designation, Link16, when referring to Tactical Digital Information Link (TADIL). Link-16 is synonymous with TADIL J. The latter term is employed only by United States Joint Services. Similarly, Link11 is synonymous with TADIL A and Link-4A with TADIL C.

TADIL A/B [Link-11]

Tactical Digital Information Link (TADIL) A/B [Link-11] employs netted communication techniques and a standard message format for exchanging digital information among airborne [TADIL-A] as well as land-based and shipboard [TADIL-B] tactical data systems. Link-11 data communications must be capable of operation in either the high-frequency (HF) or ultra-high-frequency (UHF) bands. TADIL-A/B is used by a number of intelligence platforms such as RIVET JOINT that conduct signal intelligence (SIGINT) data collection, including communications intelligence (COMINT) and electronic intelligence (ELINT).

TADIL C [Link-4A]

TADIL C is one of several tactical data links now in operation in the United States Armed Services and forces of the North Atlantic Treaty Organization (NATO). Link-4A plays an important role by providing digital surface-to-air, air-to-surface, and air-to-air tactical communications. Originally designated Link-4, this link was designed to replace voice communications for the control of tactical aircraft. The use of Link-4 has since been expanded to include communication of digital data between surface and airborne platforms. First installed in the late 1950s, Link-4A has achieved a reputation for being reliable. But Link-4A's transmissions are not secure, nor are they jam-resistant. However, Link-4A is easy to operate and maintain without serious or long-term connectivity problems.

TADIL J [Link-16]

Link-16 is a relatively new tactical data link which is being employed by the United States Navy, the Joint Services, some nations of the North Atlantic Treaty Organization (NATO) and Japan. Link-16 uses the Joint Tactical Information Distribution System (JTIDS) which is the communications component of Link-16. The E-8C Joint Surveillance Target Attack Radar System (Joint STARS) data links such as TADIL-J as well as the Surveillance Control Data Link (SCDL) to pass information to the Ground Station Modules (GSMs), which are the Army component for the Joint STARS. Link-16 does not significantly change the basic concepts of tactical data link information exchange supported for many years by Link-11 and Link-4A. Rather, Link-16 provides certain technical and operational improvements to existing tactical data link capabilities and provides some data exchange elements that the other data links lack. It provides significant improvements as well, such as jam resistance; improved security; increased data rate (throughput); increased amounts/granularity of information exchange; reduced data terminal size, which allows installation in fighter and attack aircraft; digitized, jam-resistant, secure voice capability; relative navigation; precise participant location and identification and increased numbers of participants.

Satellite TADIL-J (STJ)

A perpetually available means of Link-16/TADIL-J real-time data transfer at extended ranges is highly desired in the Fleet. Such a capability is presently available only when maintaining an aircraft aloft to serve as a relay platform for BLOS Link-16 connectivity. Satellite TADIL-J (STJ) is a developmental project using readily available Satellite Communications (SATCOM) channels for space-based Link-16 range extension. STJ is intended to augment rather than replace the existing Link-16 Beyond Line of Sight (BLOS) capability provided by airborne relay platforms.

LINK COORDINATION

Command and Control Processor (C2P)

The Command and Control Processor (C2P) provides an interface between TADILs and major force level Combat Direction C2 systems. The C2P, as an information processing system, will isolate the user systems from changing communication protocols. It will support

the TDL requirements of the installed Combat Direction System (CDS), principally in the C3 Warfare Area in support of the AAW, ASW, and ASUW arenas. The C2P performs three major functions: Information Acquisition, Communication System Management, and Information Dissemination.

C2P Rehost

Under a phased PMW 159 effort, C2P functionality is being re-hosted from AN/UYK-43A computers to high technology, off-the-shelf Versa Module Euro-card-bus (VME-bus) and AN/UYQ-70 based components. The resulting AN/UYQ-70 Embedded Processor System (EPS) will be the baseline C2P terminal fleetwide. The C2P Rehost impacts both Model 4 and Model 5 C2P.

(NEW) Air Defense Systems Integrator (ADSI)

The Air Defense Systems Integrator (ADSI) is fielded with the Air Force, Army, Marine Corps, and Navy (USN). The Air Force has designated the ADSI as the AN/TSQ-214(V). The Marine Corps has designated the ADSI as the AN/MSQ-124 Air Defense Communications Platform (ADCP). Over 130 ADSIs are in worldwide use at both strategic and tactical levels as a real-time bridge between **tactical data links** and **intelligence data** sources. Using the ADSI, the warfighter is able to make sense of normally dissimilar sources of information. The ADSI receives, processes, correlates, and displays up to 2000 tracks from local radars, tactical data links, and intelligence sources.

Common Data Link Management System (CDLMS)

In order to improve the management of all link functions in maintaining a clear tactical picture, CDLMS is a concept involving the consolidation of operational control, performance monitoring, and maintenance support functionality for all tactical links into a single system. As part of the C2P Rehost effort, the CDLMS encompasses migration of the functionality of several systems and subsystems, including C2P, the Link-11 Monitoring System (LMS-11), and the Data Link Workstation (DLWS) into the AN/UYQ-70 EPS. CDLMS also incorporates CSDTS functionality for multiple Link-11. Using information from these individual systems, CDLMS features capabilities and functions such as multi-link management, operator-defined alerts and
recommended actions, embedded training, and centralized maintenance diagnostics. To the Officer in Tactical Command (OTC), this means significantly enhanced real-time mission coordination and support of all subordinate combat elements.

(New) SGS/AC

Shipboard Gridlock System (SGS) provides the capability to compute and maintain a highly accurate and continuous gridlock solution. SGS computes and applies separate navigational and rotational PADs for both air and surface tracks. SGS calculations are much more precise than manual calculations, use all available tracks to compute solutions, and continually check and refine the gridlock solution. Additionally, SGS determines and compensates for rotational errors.

The SGS automatically aligns the local unit's coordinate system with the coordinate system of the GRU. SGS greatly improves link performance provided the GRU selected holds RR for enough tracks that all PUs hold several tracks in common with the GRU.

INTELLIGENCE

Battle Group Passive Horizon Extension System (BGPHES)

The BGPHES AN/ULQ-20 extends the Battle Group's line-of-sight radio horizon by controlling remote receivers in an aircraft sensor payload. Intercepted signals of interest are sent via the Common High Bandwidth Data Link (CHBDL) to the surface terminal (BGPHES-ST). The primary sensor carrying aircraft is the ES-3A; additionally, BGPHES will be interoperable with USAF Direction Finding/Communication Intelligence (DF/COMINT), and can be expanded to provide Electronic Intelligence (ELINT) coverage.
The BGPHES end-to-end system (AN/ULQ-20) consists of three major component systems that are fully integrated. They are an aircraft (with the Airborne Receiving System, ARS, and CDL A/B), the Common High Bandwidth Data Link, CHBDL-ST, (AN/USQ-123(V)), and the BGPHES Acquisition Reciving System - Surface Terminal, ARS-ST, (AN/SRQ-6). The ES-3A is the primary platform for the ARS (RS-6BN), a remotely controlled receiver suite.

Global Broadcast Service (GBS)

The Global Broadcast Service capitalizes on the popular commercial direct broadcast satellite technology to provide critical information to the nation's warfighters. The GBS system is a space based, high data rate communications link for the asymmetric flow of information from the United States or rear echelon locations to deployed forces.
The GBS system will "push" a high volume of intelligence, weather and other information to widely dispersed, low cost receive terminals, similar to the set-top-box used with commercial DBS. The system includes a capability for the users to request or "pull" specific pieces of information. These requests will be processed by an information management center where each will be prioritized, the desired information requested and then scheduled for transmission. . It will interface with, and augment other major DoD information systems, such as the Global Command and Control System (GCCS), as well as other theater information management systems.

BINOCULAR

BINOCULAR is an integrated NSA signals intelligence source data broadcast service system, integrating nine separate Ultra High Frequency (UHF) transmissions, transmitted through the Global Broadcast System satellite network. The BINOCULAR client, which is an air picture" data feed from NSA providing electronic order of battle [EOB] updates, reduces the need for TRE. intelligence

Common High Bandwidth Data Link - Surface Terminal (CHBDL-ST)

CHBDL-ST is a communications terminal that provides full duplex data communications (at line-of-sight ranges) between aircraft, equipped with a Common Data Link Airborne (CDL

A/B), and shipboard users' signal processing equipment. The terminal receives variable data rates with an encryption and decryption capability in accordance with the interface specifications of the supported systems. The CHBDL-ST transmits user commands to the CDL A/B for Battle Group Passive Horizon Extension System (BGPHES) or JSIPS-N (ATARS) Prime Mission Equipment (PME) in the aircraft. CHBDL-ST receives link status and user mission data in the downlink and provides this mission data to the BGPHES-ST and JSIPS-N shipboard processors. The command uplink has Low Probability of Intercept (LPI) characteristics based upon parabolic antenna directivity, signal modulation format and transmitter power output control. The system is capable of operating only one link at a time.
The CHBDL-ST is comprised of two major functional subsystems, the Expandable Multi-Link Processor (EMLP) subsystem, and the Antenna/Radio Frequency (ARF) subsystem. The EMLP Subsystem consists of EMLP Group I, located in Radio or CIC spaces, and EMLP Group II located in the BGPHES-ST and JSIPS-N equipment spaces. The EMLP subsystem performs data formatting, modulation/demodulation, and Link Control (LC) operations that are divided functionally between the Command and Control Processor (CCP), the Modem(s), and the Link Switch (LS).

Commander's Tactical Terminal (CTT) AN/TSC-125

The CTT is a single-channel, anti-jam, COMINT/ELINT tasking and reporting transmitter/receiver designed for near-real-time dissemination of tactical intelligence. The purpose of the CTT is to provide the capability of selected Army and Air Force airborne collection systems to forward perishable intelligence to deep close and rear operations centers.

Joint Tactical Terminal (JTT)

The Joint Tactical Terminals (JTT) and the Commander's Tactical Terminal (CTT) is a family of special application UHF tactical intelligence terminals which provide the capability to disseminate time sensitive Command, Control, Communications, Computer, and Intelligence (C41), and battlefield targeting information to tactical commanders-and intelligence nodes. This information is provided in near-real-time and allows selected collection managers at all echelons a full-duplex capability to dynamically adjust pre-planned tasking. The terminals supply the critical data link to battle managers, intelligence centers, air defense, fire support and aviation nodes across all services.

AN/SYQ-23 Joint Service Imagery Processing System (JSIPS-N)

The Joint Service Imager Processing System - Navy (JSIPS-N) is a shipboard digital imagery system with the capability to receive, process, exploit, store, and disseminate imagery products and imagery derived intelligence reports based upon multi-source imagery from national and tactical sensors. The primary purpose of JSIPS-N is to increase the self-sufficiency afloat of tactical aviators and strike, naval fire support and expeditionary force planners in the precision delivery of ordnance. Future weapons systems such as Joint Direct Attack Munitions (JDAM) and Joint Stand-Off Weapon (JSOW) will depend on JSIPS-N to provide near real-time reconnaissance imagery to derive target/aim-point coordinates to the level of accuracy required to achieve mission success.

Joint Worldwide Intelligence Communications System [JWICS]

Joint Worldwide Intelligence Communications System [JWICS] replaces the DDN DSNET3 as the SCI portion of DISN. It provides DODIIS users a SCI level high-speed multimedia network using high-capacity communications to handle data, voice, imagery, and graphics. The system uses JDISS as its primary means of operator interface and display.

Joint Surveillance Target Attack Radar System (Joint STARS / JSTARS)

The Joint Surveillance Target Attack Radar System (Joint STARS) is a long-range, air-to-ground surveillance system designed to locate, classify and track ground targets in all weather conditions. While flying in friendly airspace, the joint Army-Air Force program can look deep behind hostile borders to detect and track ground movements in both forward and rear areas. It has a range of more than 150 miles (250 km). These capabilities make Joint STARS effective for dealing with any contingency, whether actual or impending military aggression, international treaty verification, or border violation.

Tactical Intelligence Information Exchange Subsystem-Phase II (TACINTEL II+)

The TACINTEL II+ System is a computerized message processing system that makes it possible to transmit and receive special intelligence (SI) message traffic via satellite in a controlled environment while simultaneously screening two predetermined sub-channels of the Fleet Broadcast transmissions.

Tactical Related Applications (TRAP) Data Dissemination System [TDDS]

Tactical Related Applications (TRAP) Data Dissemination System provides worldwide dissemination of high-interest ELINT, contact reports, and parametric information at the SECRET level.

Tactical Information Broadcast System [TIBS]

The primary function of TIBS is to provide near-realtime tactical information to the battle commanders for targeting, battle management, and situational awareness. After the intelligence and information is collected and processed, TIBS supports the rapid, global dissemination of the battle situation to the warfighter at all levels of command in a common, readily understood format, and in sufficient time to react to the data.

Tactical Reconnaissance Exchange System Relay [TRIXS]

The Tactical Reconnaissance Intelligence Exchange System (TRIXS) Network is a corp-level line-of-sight (LOS), interactive (transmit-receive), ultrahigh frequency (UHF) network that transmits messages in near-real-time to up to 250 addressees. The TRIXS operates at the SECRET and sensitive compartmented intelligence (SCI) levels.

RADIANT MERCURY [RM]

RADIANT MERCURY is a software application which automatically sanitizes and downgrades formatted classified documents. The automation of the sanitization and downgrade process decreases the time needed to perform these functions, and eliminates human error.

COMMUNICATIONS

Automated Digital Network System (ADNS)

The Automated Digital Network System (ADNS) is the backbone to JMCOMS.
ADNS provides the following improvements:

- Furnishes autonomous, digital, interoperable, joint and secure LAN/WAN management and control for RF assets on demand to Navy deployed personnel aboard ships and at shore sites
- Ensures worldwide communications connectivity via the RF assets included in DMR and ITP
- Automates all communications systems-replaces several unique subnetworks with a single integrated network hub
- Provides Integrated Network Management (INM) which resolves problems caused by overloading or underutilization of existing communications circuits, yielding a 4X increase in multispectrum throughput efficiency over legacy systems
- Applies NDI COTS/GOTS router, switching and packet data technologies enabling reduced life cycle costs

ADNS is composed of three functional elements: Integrated Network Management (INM), Routing and Switching (R&S), and Channel Access Protocols (CAP). The INM provides the flexibility to adapt communications to available assets and mission priorities. It uses COTS software and resides on TAC-4 workstations. The R&S subsystem provides the interface to users, and performs routing and switching of user data to available transmission circuits. The objective R&S subsystem includes a COTS IP router, a suite of common packet routing protocols and COTS Integrated Services Digital Network (ISDN) and ATM switches. CAP equipment manages data exchange over JMCOMS circuits and networks, monitors network quality of service, and reports loading and error conditions to the INM.

JMCS SLICE

Slice fields the following capabilities:

- Through the Digital Modular Radio (DMR), satisfies <2 GHz tactical terrestrial and SATCOM communications requirements
- DMR provides flexible, adaptive, interoperable, software configurable radios applying open systems architecture
- Builds upon common NDI COTS/GOTS hardware and software
- eliminates stand-alone stovepipe terminal systems

- Exploits RF-Power Amplifier Technology
- Implements Advanced Signals Protection (INFOSEC/TRANSEC)
- Can tune and perform related functions within multiple frequency spectrums
- Can tune and perform related functions within multiple frequency spectrums
- Fields integrated, multiband and broadband antennas such as Multi-functional Electromagnetic Radiating System (MERS) and Lo Stack

DMR/Slice goals are to meet the existing requirements from legacy programs, address present fleet requirements, and provide a nucleus for hosting new waveforms, protocols, dynamically adaptive bandwidths and power controls. This will result in radically more robust communications within the spectrum, and provide a vehicle that is able to grow to meet future demands.

AN/WSC-6

DSCS SHF continues to provide the Navy with the required global connectivity among fleet units, joint forces, allied and NATO forces, and Naval C4I commands. Currently, SHF capability is deployed on Numbered Fleet Commander flagships, CVNs, flag-capable amphibious ships, and SURTASS platforms via the AN/ WSC-6(V) 1 through AN/ WSC-6(V) 4 SHF SATCOM terminals.

AN/ WSC-6(V) 1. The AN/ WSC-6(V) 1 SHF terminal is installed aboard SURTASS vessels. The terminal is interfaced with the MD-1030A(V) binary phase-shift keying (BPSK) narrowband modem and has a 4-foot antenna.

AN/ WSC-6(V) 2. The AN/ WSC-6(V) 2 is installed aboard numbered fleet flagships and uses the OM-55(V)/ USC spread-spectrum AJ modem and the ComQuest CQM-248A phase-shift keying (PSK) narrowband modem and has one or two 7-foot antennas. The (V) 2 terminal uses an 8-kW transmitter with either the spread-spectrum modem or the narrowband modem or both if an IF patch is used. The (V) 2 can also use a 350-watt TWTA with the narrowband modem in conjunction with the 8-kW Klystron power amplifier with the spread-spectrum modem if the diplexer is used.

AN/ WSC-6(V) 4. The newer generation AN/ WSC-6(V) 4 SHF terminal is installed aboard CV/ CVN, LHA, and LHD class ships. These terminals use the CQM-248A narrowband modems, the (V) 2 up-and down-converters, 350-watt TWTAs and 7-foot antenna(s).

AN/ WSC-6(V) 5. The AN/ WSC-6(V) 5 is the shipboard SHF terminal that will replace the (V) 2 and (V) 4 terminals on "big deck" platforms. It will use Versa Module Eurocard (VME) 32-bit bus technology employing circuit card assemblies to replace the antenna and servo-controllers; the up-, down-, and tracking converters; the local operation control center; and the radio frequency selector. It will provide dual termination capability at the converter to allow connectivity to GMF, and use one or two 7-foot antennas. In addition it will have redundant (back-up) TWTAs (2kW and 350W). These terminals will use two narrowband modems; one will be the CQM-248A, the second is to be determined.

AN/ WSC-6(V) X. The planned AN/ WSC-6(V) X will provide SHF capability to CG 47, DDG 51, and TOMAHAWK-capable SPRUANCE-class "shooters" as well as well as Combat Logistics Force (CLF) and LPD 17 class ships. The terminal will consist of a single rack of equipment, FDMA modems, and either single or dual 7-foot parabolic antennas.

Tactical Data Information Exchange Subsystem (TADIXS)

The Tactical Data Information Exchange Subsystem (TADIXS) is designed to support the exchange of over-the-horizon targeting (OTH-T) information between shore and Fleet-based computer systems (collectively referred to as tactical data processors [TDPs]) for Navy cruise missile operations.

Implementation of OTH-T data communication via TADIXS has been accomplished in four distinct phases, ranging from a manual, contention-based network to a fully automated worldwide system with independent TADIXS and Officer in Tactical Command Information Exchange Subsystem (OTCIXS) networks.

TADIXS Phase I OTH-T communications were initially accomplished by the manually intensive Outlaw Shark Digital Interface Unit (OSDIU) at shore and afloat units. Shore users time-shared radio assets via a Digital Sharing Device (DSD) located at the supporting Naval Computer and Telecommunications Area Master Station (NCTAMS).

TADIXS Phase II the Interconnecting Group ON-143(V)61USQ replaced the OSDIU as the link control device. The OTCIXS satellite network was introduced to provide a two-way satellite link to support inter- and intra-Battle Group communications. In Phase II, OTCIXS was also used for OTH-T communications support between shore and afloat units.

TADIXS Phase III was characterized by a complex DSD/ON-143(V)61USQ shore configuration, the addition of a second ON-143(V)6/USQ for afloat platforms, and the introduction of a new shore-to-ship tactical circuit, TADIXS, to support OTH-T communications. The OTCIXS satellite network continues to provide inter and intra-Battle Group communications and is now designated as the return path for ship-to-shore OTH-T communications.

TADIXS Phase IV will replace the currently operational Phase III shore system, providing integrated worldwide connectivity among the OTH-T community, using both dedicated connectivity and satellite links, through a series of computer-controlled switching nodes called TADIXS Gateway Facilities (TGFs).

(New) Single Channel Ground and Airborne Radio System (SINCGARS)

SINGARS is a VHF (30-88 MHZ) range anti-jam (AJ) transcevier. SINCGARS denotes a family of VHF-FM frequency hopping, anti-jam combat net radios. SINCGARS is being implemented in four distinct phases. The first integrates SINCGARS AN/SRC-54 radio set as a non-jam replacement for the AN/VRC-46. The second phase usea one AN/SRC-54 (Type I) in a AJ mode aboard ship. The third phase will integrate up to 3 AN/ARQ-53 AJ radios (Type II) into a single antenna, and the fourth phase adds a 2 channel AJ airborne relay capability.

SINCGARS Improvement Program (SIP) brings the ability to integrate and share data via Transmission Control Protocol/ Internet Protocol (TCP/IP).

TAB F

CINCLANTFLT Approved Baseline Message

R 041311Z APR 00 PSN 138048Q24
FM CINCLANTFLT NORFOLK VA//N66//
(addressees at end of document)

BT
THIS IS A 4 SECTIONED MSG COLLATED BY MDS
UNCLAS
MSGID/GENADMIN/CINCLANTFLT N66/PART 1 OF 2 PART 2 CLF 041313ZAPR00//

SUBJ/JOHN F KENNEDY BATGRU AND WASP ARG COMBAT SYSTEMS AND C4ISR /FINAL BASELINE CONFIGURATION CHANGES FOR CY2002 DEPLOYMENT.//

REF/A/DOC/CLF-CPF/-//
REF/B/CON/CLF/23FEB00//

NARR/
REF A IS CLF/CPF 4720.3A(DRAFT) WHICH DESCRIBES THE D-30 PROCESS.
REF B WAS KENNEDY/WASP 02 BASELINE REVIEW BOARD (BRB) DEPLOYMENT PLANNING CONFERENCE (D-24).//

POC/MR. J.J. JOHNSON/N661/CINCLANTFLT/-/TEL:(757)836-5420/TEL:-DSN-836-5420/E-MAIL:JOHNSONJJ@CLF.NAVY.MIL//
POC/LCDR S. PROSE/N664/CINCLANTFLT/-/TEL:(757)836-7796/TEL:-DSN-836-7796/E-MAIL:PROSES@CLF.NAVY.MIL//
POC/MAJ C. LAMBERT/N665/CINCLANTFLT/-/TEL:(757)836-3589/TEL:-DSN-836-3589/E-MAIL:LAMBERTCP@CLF.NAVY.MIL//

RMKS/
1. IAW REF A, THE DEPLOYMENT PLANNING CONFERENCE (REF B) WAS HELD ON 23 FEB 00 FOR THE JOHN F KENNEDY BATGRU/WASP ARG 02 DEPLOYMENT. DURING REF B, THE BASELINE REVIEW BOARD APPROVED THE (QUOTE) FINAL BASELINE CONFIGURATION (END QUOTE). TCD FOR ALL SHIPS IN THIS BF IS 07 AUG 01. THIS FINAL BASELINE CONFIGURATION INCLUDES THE INSTALLATIONS LISTED IN PARAS 5 THROUGH 8 BELOW. THE APPROVED FINAL BASELINE CONFIGURATION IS ALSO POSTED ON THE NAVSEA 53 AFLOAT MASTER PLANNING SYSTEM (AMPS) WEB SITE: HTTP:(DOUBLE SLASH)CSMIS.RGESVC.COM.

2. CHANGES TO THE FINAL BASELINE (EITHER ADDITIONS OR DELETIONS), MUST BE PRESENTED TO THE BATTLE FORCE CONFIGURATION CONTROL BOARD (BF CCB). SUBMISSIONS TO THE BF CCB INVOLVE COMPLETION OF A RISK ASSESSMENT QUESTIONNAIRE IN ELECTRONIC FORM, ACCESSIBLE ON THE NAVSEA 53 AMPS WEB SITE (PARA 1 ABOVE).

3. PER REF A, ALL SCHEDULED INSTALLATIONS SHOULD BE COMPLETED PRIOR TO TCD. INSTALLATIONS THAT WILL NOT BE COMPLETED PRIOR TO TCD REQUIRE ADDITIONAL APPROVAL, INITIATED BY PROGRAM OFFICE SUBMITTING AN A-O MESSAGE TO CINCLANTFLT (NO EXCEPTIONS). DATES LISTED BELOW ARE PLANNED COMPLETION DATES AND ARE SUBJECT TO CHANGE. CHANGES TO DATES DO NOT REQUIRE CINC APPROVAL UNLESS INSTALLATION WILL VIOLATE TCD. NOTE: TCD WAS USED AS DEFAULT WHERE ESTIMATED COMPLETION DATE WAS NOT AVAILABLE.

4. APPROVAL OF FINAL BASELINE DOES NOT NEGATE STANDARD INSTALL PROCEDURES. JCF/SID/SARS/ILS ARE REQUIRED FOR INSTALLS. DETAILS OF INSTALLS MUST BE COORDINATED WITH TYCOMS. PROGRAM OFFICES SHOULD MAKE EVERY EFFORT TO ENSURE INSTALLATIONS ARE SCHEDULED IN FMPMIS, AIPS, GAITS, AND/OR AT QUARTERLY SCHEDULING CONFERENCES.

5. LIST OF APPROVED INSTALLATIONS FOR JFK BATGRU (TCD 07 AUG 01):
ABBREVIATIONS:
SOFTWARE DELIVERY = SWD
FIELD CHANGE = FC
P/O = PART OF

SYSTEM	NOUN NAME	INSTALL ECD	SHIPALT/SOFTWARE VERSION COMMENTS
A. USS JOHN F KENNEDY (CV 67)			
ADSI		8/7/01	VER 10.8.2.4 (CROSS DECK)
CTAPS		INSTALLED	VER 5.2.3
TBMCS HOST (HARDWARE UPGRADE)		INSTALLED	
C2P		7/12/00	M5R4.06A02
DMR (UHF SATCOM)		8/7/01	TBD
EHF MDR		8/7/01	8700K
FCIP		8/7/01	TBD
GCCS-M		8/7/01	3.1.2
ISNS (IT-21 ATM) LAN		8/7/01	TBD
MK 26 MOD 0	IPDS (CBR)	FY01Q1	08354/VER 3.17/D3.1.1
NECC/TIP (NT)		8/7/01	INCL W/MDR
NSM (CAW)		8/7/01	VER 4.2
NTCSS (OPTIMIZED UPGRADE)		8/7/01	FC# TBD
SRC-55 HYDRA		12/00	BELOW FLIGHT DECK ONLY
SWQ-1(V)1	APS	02/01	VER 3.2
SYQ-20(V)	ACDS BLOCK 1	FY00Q3	ACDS LEVEL 2.1.7
SYQ-23A	JSIPS-N	02/01	VER 3.2
SYQ-26(V)1	NAVMACS II	8/7/01	TBD
TPX-42A(V)14	CATCC/DAIR	8/7/01	07979/VER 000.01
TRIBUTARY		8/7/01	X-DECK
TVSS-TRANS VOLTAGE SURGE SUPP		12/00	TBD
UMK-4(V)2	NITES 2000	8/7/01	8718K
USG-2(V)	CETPS (CEC)	08/07/01	RELEASE QC 2.0.14
USQ-128(V)1	MDS	02/01	VER 4.X
USQ-148B(V)2	SCI ADNS	8/7/01	TEMPALT COMPLETE
USQ-T46A(V)	BFTT	07/01	VER 3.0.3
WLR-1H(V)7	ESM	09/00	08688
WSC-6(V)5 SHF DUAL CHANNEL		8/7/01	8498K/SWD
B. USS HUE CITY (CG 66)			
AEGIS WEAPON SYSTEM (AWS)		8/7/01	B/L VER 6.1.3
C2P		INSTALLED	M5R4.06A02
DMR	UHF SATCOM	8/7/01	TBD
EHF MDR		8/7/01	606K
GCCS-M		8/7/01	3.1.2/CSI 3.5.1
INMARSAT B HSD SINGLE		8/7/01	555.2K
ISNS (IT-21 ATM) LAN		8/7/01	TBD
MK 26 MOD 0	IPDS (CBR)	FY00Q2	00579/VER 3.17/D3.1.1
MK 41 MOD 0	VLS(122-CELL)	8/7/01	LCCP 0581DC
MK 53	DLS (NULKA)	INSTALLED	00573
MK 86/9	GFCS	8/7/01	VER 0651-22.4.1

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MK 116 MOD 7    ASWCS           8/7/01    VER 7/3-007C(SET 7C)
PAGE 10 RUCOMCB5393 UNCLAS
NECC/TIP (NT)                   8/7/01    INCL W/MDR
NTCSS INCR 1 OPTIMIZED          8/7/01    0604K    SERVER/PC UPGRADE
-     INCR 2 NSIPS              11/00     SWD
SGS/AC (162 COMPUTER)           8/7/01    VER 4.5.5
SLQ-32A(V)3                     06/01     VER V3R17.03A_01
SSQ-120 T-RDF PRE-GROOM        INSTALLED  543K
-               HARDWARE        11/30/01  X-DECK
STICS                           11/30/01  X-DECK
SWG-1A(V)22     HSCLCS         INSTALLED  VER 9/10
SYQ-26(V)2      NAVMACS II/SMS  8/7/01    TBD
USG-2(V)        CETPS (CEC)     8/7/01    RELEASE QC 2.0.14
USQ-141         CTT H/3         8/7/01    TBD
USQ-144B(V)2    ADNS            8/7/01    609K
USQ-146         RUBICON         11/30/01  X-DECK (NOTE 1)
USQ-148A(V)2    SCI ADNS        8/7/01    TBD
WSC-6(V)7       SHF             8/7/01    0321K
WSN-7(V)1       RLGN           INSTALLED  00519/VER 1812590 REV R
-                                           AND VER 1812591 REV N
-
C. USS VICKSBURG (CG 69)
AEGIS WEAPON SYSTEM (AWS)       8/7/01    B/L VER 6.1.3
CADRT                           8/7/01    TBD
C2P                             02/00     M5R4.06A02
DMR (UHF SATCOM)                8/7/01    TBD
EHF MDR                         8/7/01    606K
GCCS-M                          8/7/01    3.1.2/CSI 3.5.1
INMARSAT B SINGLE               8/7/01    555.1K
INMARSAT B HSD KIT              8/7/01    555.2K
ISNS (IT-21 ATM) LAN            8/7/01    TBD
MK 41 MOD 0     VLS(122-CELL)   8/7/01    LCCP 0581DC
MK 53           DLS (NULKA)     04/00     00573
MK 86/9         GFCS            8/7/01    VER 0651-22.4.1
NECC/TIP (NT)                   8/7/01    INCL W/MDR
NTCSS INCR 1 OPTIMIZED          8/7/01    0604K    SERVER/PC UPGRADE
-     INCR 2 NSIPS              11/00     SWD
SGS/AC (162 COMPUTER)           8/7/01    VER 4.5.5
SLQ-20B                         04/00     00611
SLQ-32A(V)3                     06/01     VER V3R17.03A_01
-    DRFMU                      09/00     FC2 (ECP 577)
SQQ-89(V)6     TORP ALERT UPGD  8/7/01    TBD/BASELINE SWD
- USQ-132(V)   TDSS             8/7/01    TBD/VER 7.3.0.4 (P/O TAU)
- SQS-53C(V)1                   8/7/01    VER 6.0     (P/O TAU)
SSQ-120 (T-RDF) PRE-GROOM       8/7/01
-               HARDWARE        11/30/01  X-DECK
STICS/MISTE II                  11/30/01  X-DECK
SWG-1A(V)22     HSCLCS         INSTALLED  VER 9/10
SYQ-26(V)2      NAVMACS II      8/7/01    633K
USG-2(V)        CETPS (CEC)     8/7/01    RELEASE QC 2.0.14
USQ-141         JTT OR CTT H/3  8/7/01    TBD
USQ-144B(V)2    ADNS            8/7/01    609K
- SWD (UPGRADE FROM BUILD 1)    8/7/01    BASELINE BUILD 2 (SWD)
USQ-148A(V)2    SCI ADNS       INSTALLED  TEMPALT
WSC-6(V)7       SHF             8/7/01    0321K
WSN-7(V)1       RLGN            04/00     00519/VER 1812590 REV R
-                                         AND VER 1812591 REV N
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D. USS CARNEY (DDG 64)

AEGIS WEAPON SYSTEM (AWS)		07/00	B/L VER 5.3.7.2
C2P		8/7/01	M5R4.06A02
- MODEL 4 TO MODEL 5 UPGRADE		FY00	257K
DMR (UHF SATCOM)		8/7/01	TBD
EHF MDR		8/7/01	330K
GCCS-M		8/7/01	3.1.2
ISNS (IT-21 ATM) LAN		8/7/01	TBD
MK 41 MOD 2	VLS(90-CELL)	07/00	LCCP 0581DC
MK 53	DLS (NULKA)	07/00	00289
MK 160/4 GUN COMPUTING SYS		07/00	GMP 0586I006A/GCC 0587I010
NECC/TIP (NT)		8/7/01	INCL W/MDR
NAVSSI BLK 3		8/7/01	264K
NTCSS OPTIMIZED UPGRADE		8/7/01	FC# TBD
SGS/AC (162 COMPUTER)		07/00	00194/VER 4.5.5
SLQ-32A(V)2		06/01	VER V2R17.03A_01
SQQ-89(V)6	TORP ALERT UPG	FY00Q4	00321/SET 7C/SET 8C
- USQ-132(V) TDSS (P/O TAU)		8/7/01	00321/VER 7.3.0.4 (SET 8C)
- SQS-53C(V)1 SONAR (P/O TAU)		8/7/01	VER 03606501-001/6.0 (7C)
- SQQ-89 (ADJ PROC) (P/O TAU)		8/7/01	00321/VER 5.09
- SQR-19B(V)1 TACTAS (P/O TAU)		8/7/01	VER 04051101A/SYS 7.0 (7C)
- MK 116/7 ASWCS (P/O TAU)		8/7/01	VER 7/0-007C (SET 7C)
SWG-1A(V)22	HSCLCS	05/00	VER 9/10
SWG-4(V)	ATWCS LCGR T3L4	07/00	00219/LCGR 1.7.0.2
SYQ-26(V)2	NAVMACS II/SMS	8/7/01	356K
TSCSI LOAD OUT		8/7/01	X-DECK (NOTE 2)
USQ-148(V) SCI	ADNS CARRY ON	8/7/01	TBD
-	ADNS PRE-GROOM	8/7/01	
WSN-7(V)1	RLGN	07/00	00240/VER 1812590 REV R
-			AND VER 1812591 REV N

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E. USS THE SULLIVANS (DDG 68)

AEGIS WEAPON SYSTEM (AWS)		04/00	B/L VER 5.3.7.2
C2P		8/7/01	M5R4.06A02
DMR	UHF SATCOM	8/7/01	TBD
EHF MDR		8/7/01	330K
GCCS-M		8/7/01	3.1.2
ISNS (IT-21 ATM) LAN		8/7/01	TBD
MK 41 MOD 2	VLS(90-CELL)	04/00	LCCP 0581DC
MK 53	DLS (NULKA)	08/00	00289
MK 160/4 GUN COMPUTING SYS		04/00	GMP 0586I006A/GCC 0587I010
NECC/TIP (NT)		FY00	INCL W/MDR
NTCSS OPTIMIZED UPGRADE		8/7/01	FC# TBD
- INCR 2 NSIPS		11/00	SWD
SGS/AC (162 UPGRADE)		05/00	VER 4.5.5
SLQ-32A(V)3		06/01	VER V3R17.03A_01
- DRFMU		09/00	FC2 (ECP 577)
- DDI		09/00	00293 (ECP 413)
SQQ-89(V)6	TORP ALERT UPGD	FY00Q3	00321/SET 8C
- USQ-132(V)	TDSS (P/O TAU)	8/7/01	00321/VER 7.3.0.4 (SET 8C)
STICS/MISTE II		11/30/01	X-DECK
SWG-1A(V)22	HSCLCS	06/00	VER 9/10
SWG-4(V)	ATWCS LCGR TL4	08/00	00296/LCGR 1.7.0.2
SYQ-26(V)2	NAVMACS II/SMS	8/7/01	356K
TSCSI LOAD OUT		8/7/01	X-DECK (NOTE 2)
USQ-148(V)	SCI ADNS	8/7/01	CARRY ON

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-               ADNS PRE-GROOM  8/7/01
USQ-T46A(V)     BFTT            08/00     00280/VER 3.0.2
- INCLUDES MK 50 ACTS (REHOSTED IN BFTT)
USQ-T47(V)      BEWT            08/00     00348/VER 2.0
WSN-7(V)1       RLGN            08/00     00240/VER 1812590 REV R
-                                         AND VER 1812591 REV N
-
F. USS ROOSEVELT (DDG 80)
AEGIS WEAPON SYSTEM (AWS)       8/7/01    B/L VER 6.1.3
ARR-75 SONOBUOY RCVR                      SCN
COMBAT DF BLK 1                           SCN
C2P                             8/7/01    M5R4.06A02
DMR             UHF SATCOM                SCN
EHF MDR                         8/7/01    330K
GBS                             8/7/01    324K
GCCS-M                          8/7/01    3.1.2/CSI 3.5.1
HSFB                                      SCN
INMARSAT B HSD KIT                        SCN
ISNS (IT-21 ATM) LAN            FY00      SCN
MINI-DAMA                                 SCN
MK 35/15 SVTT W/MK 50                     SCN
FLIGHT II A UPGRADES
- MK 41 VLS (96 CELL)                     SCN
- LAMPS MK 3 CAPABLE                      SCN
MK 160 MOD 4 GUN COMPUTING SYS         SCN GMP 0586I006A/GCC 0587I010
NAVSSI BLK 3                              SCN
NAVY ORDER WIRE                           SCN
NECC (NT)                                 SCN
NECC/TIP (NT)                   8/7/01    INCLUDED W/MDR
NTCSS INCR 1 OPTIMIZED                    SCN SERVER PC UPGRADE
OE-120/UPX      IFF             06/01     FC2
SGS/AC (162 COMPUTER)           8/7/01    VER 4.5.5
SLQ-32A(V)3                     06/01     VER V3R17.03A_01
- DRFMU                         02/01     FC2 (ECP 577)
- DDI                           02/01     00293 (ECP 413)
SPY-1B TRACK INIT PROC (TIP)              SCN
SQQ-89(V)10 SASWCS                        SCN
- USQ-132(V) TDSS                         SCN/VER 7.2.5.3
- SQQ-89(V)10   SWD                       SCN/VER 04512407-LDT 1.0
- SQS-53(V)4                              SCN/04500305/7.1
- SQQ-89 SLR                              SCN/03726101A/SYS 2.2.1
- SQQ-89 IP                               SCN/VER 3.5
- UYQ-25B(V)1 SIMAS II                    SCN/VER 5.5
- MK 116/7 ASWCS                          SCN/VER 7/7-006C
- SQQ-89(V)-T4 OBT                        SCN/REVISION F
SRC-54B SINCGARS (SIP)                    SCN
SRQ-4 FLIR INTEGRATION                    SCN
SRQ-4 LAMPS MKIII XCVR                    SCN
STICS                           11/30/01  X-DECK
SWG-4(V)        ATWCS LCGR TL4            SCN/LCGR 1.7.0.2
SYQ-26(V)2      NAVMACS II SMS  8/7/01    356K
UQN-4A SNR FATHOMETER                     SCN
URC-131A        HFRG                      SCN
USC-38 EHF SATCOM (LDR)(SINGLE) + FC1,5   SCN
USQ-120         LINK 11                   SCN
USQ-141         CTT H/3                   SCN
USQ-144B(V)2    ADNS                      334K  SCN
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USQ-148(V)      SCI ADNS        8/7/01    CARRY ON
USQ-T46A(V)     BFTT            03/00     VER 2.9.5 (HARDWARE - SCN)
WQC-2A          UNDERWATER COMMS          SCN
WQC-6           PROBE ALERT               SCN
-
G. USS SPRUANCE (DD 963)
DMR (UHF SATCOM)                8/7/01    TBD
EHF MDR                         8/7/01    999K
GCCS-M                          8/7/01    3.1.2
INMARSAT 2ND SYSTEM (DUAL)      8/7/01    1018K
ISNS (IT-21 100MBPS) LAN        8/7/01    1021K
MK 23 MOD 5     TAS             FY00Q3    VER 0716-5N14
NECC/TIP NT                     8/7/01    INCL W/MDR
NTCSS INCR 1 OPTIMIZED          8/7/01    00997   SERVER/PC UPGRADE
-     INCR 2 NSIPS              11/00     SWD
SLQ-32A(V)3                     06/01     VER V3R17.03A_01
-     DRFMU                     09/00     FC2 (ECP 577)
SQQ-89(V)5      ASWCS           FY00Q4    SET 7C (SWD)
- SQQ-89 INTERFACE PROCESSOR    FY01Q1    00886/VER 3.5 (SET 8A)
- UYQ-25B(V)1   SIMAS II        FY01Q1    00886/OP VER 5.5 (SET 8A)
- MK 116/7 ASWCS                FY00Q4    VER 7/5-007C
STICS/MISTE II                  11/30/01  X-DECK
SWG-1A(V)22     HSCLCS          05/00     VER 9/10
SWG-4(V)        ATWCS LCGR TL4  07/00     00978/LCGR 1.7.0.2
SYQ-17(V)       RAIDS           FY00Q3    VER 5.6.28
SYQ-20(V)       CDS 9+          FY00Q3    VER 0010A(BL6F/WV8R10)4.0
SYQ-26(V)2      NAVMACS II/SMS  8/7/01    1026K
USQ-148A(V)2    SCI ADNS        8/7/01    TBD
USQ-T46A(V)     BFTT            08/00     VER 3.0.2
USQ-T47(V)      BEWT            07/00     VER 2.0
USQ-T48(V)      TSSS            08/00     EDM
-
H. USS UNDERWOOD (FFG 36)
DMR (UHF SATCOM)                8/7/01    TBD
FLEXIBLE UNIV STOW SYS          FY00      00289
PAGE 09 RUCOMCB5396 UNCLAS
GCCS-M                          8/7/01    3.1.2
INMARSAT B HSD KIT              INSTALLED 385.2K
ISNS (IT-21 100MBPS) LAN        8/7/01    0424K
MK 92 MOD 6     FCS CORT        FY01Q1    CCP/WCP 637G007EA
NTCSS INCR 1 OPTIMIZED          8/7/01    399K    SERVER/PC UPGRADE
SLQ-32(V)5                      06/01     VER V5R17.03A_01
SQQ-89(V)-T2    OBT             FY00Q3    REVISION F
SWG-1A(V)5      MK 13           12/00     VER 9/10
SYQ-17(V)       RAIDS           FY01Q1    VER 5.6.28
SYQ-20(V)       CDS LEVEL 13    FY01Q2    NATIVE L13 0004X
SYQ-26(V)3      NAVMACS II/SMS  8/7/01    430K
-
I. USS TAYLOR (FFG 50)
DMR (UHF SATCOM)                8/7/01    TBD
GCCS-M                          8/7/01    3.1.2
INMARSAT B HSD KIT             INSTALLED  385.2K
ISNS (IT-21 100MBPS) LAN        8/7/01    0424K
MK 15/21        CIWS BLOCK 1B   10/00     PGM USN 1B01/WINPASS
MK 92/6         FCS CORT        FY01Q1    CCP/WCP 637G007EA
NTCSS INCR 1 OPTIMIZED          8/7/01    399K      (SERVER/PC UPG)
SLQ-32(V)5                      06/01     VER V5R17.03A_01
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SQQ-89(V)-T2 OBT FY00Q3 REVISION F
SWG-1A(V)5 MK 13 06/00 VER 9/10
SYQ-17(V)2 RAIDS 08/00 FC3 (INTERFACE CARD)
- SWD FY01Q1 VER 5.6.28
SYQ-20(V) CDS LEVEL 13 FY01Q2 NATIVE L13 0004X
SYQ-26(V)3 NAVMACS II/SMS 8/7/01 430K
-
J. USS BOISE (SSN 764)
BPS-15H RADAR INSTALLED 04124/REV B
BQQ-10 ARCI PHASE II 11/00 04085/VER 4.6.A
BRC-7 BASEBAND SWITCH 8/7/01 4048K
BSQ-9 TIME FREQ DISTRO SYS 8/7/01 4156K
CCS MK 2 BLOCK 1C 11/00 04044/SWD
EHF STS UPG FM TEMPALT 11/25/00 4116KP
GCCS-M 8/7/01 3.1.2
NECC/TIP(NT) 11/25/00 INCL W/MDR
NTCSS INCR 1 OPTIMIZED FY01 817.1K SERVER/PC UPGRADE
SUB HDR 11/25/00 4173K
SUB LAN PHASE I 11/25/00 4210KP
SUB UHF MDR ASYM 11/25/00 TBD
SYQ-26(V) NAVMACS II/SMS 11/25/00 TBD
USC-38 FC EHF MDR 11/25/00 4173K
USC-42(V)2 MINI-DAMA 11/25/00 3128KP
USQ-119(V) JMCIS 98 11/25/00 4161KP
USQ-144(V)3 ADNS 11/25/00 4131KP
-
K. USS TOLEDO (SSN 769)
BPS-15H RADAR 02/01 04124/REV B
BSY-1 INSTALLED C4.2 V2A
EHF FOT -INCLUDING MDR 7/27/01 TBD
EHF STS UPG FM TEMPALT 7/27/01 4116KP
PAGE 06 RUCOMCB5397 UNCLAS
GCCS-M 8/7/01 3.1.2
NECC/TIP (NT) 7/27/01 INCL W/FOT
NTCSS INCR 1 OPTIMIZED FY01 817.1K SERVER/PC UPGRADE
SUB HDR 7/27/01 4173KP
SUB LAN PHASE II 7/27/01 4210KP
SUB UHF MDR ASYM 7/27/01 TBD
SYQ-26(V) NAVMACS II/SMS 8/7/01 TBD
USC-42(V)2 MINI-DAMA 7/27/01 3128KP
USQ-119(V) JMCIS 98 7/27/01 TBD
USQ-144(V)3 ADNS 7/27/01 4131KP
-
L. USNS BIG HORN (TAO 198)
DMR (UHF SATCOM) 8/7/01 TBD
GCCS-M 8/7/01 3.1.2
INMARSAT B HSD KIT FY00 TBD
SYQ-26(V)3 NAVMACS II/SMS 8/7/01 TBD
USQ-144D(V)2 ADNS 8/7/01 TBD
-
M. USNS MOUNT BAKER (TAE 34)
DMR (UHF SATCOM) 8/7/01 TBD
GCCS-M 8/7/01 3.1.2
INMARSAT B HSD KIT INSTALLED
SYQ-26(V)3 NAVMACS II/SMS 8/7/01 TBD
USQ-144D(V)2 ADNS 8/7/01 TBD
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NOTE 1: RUBICON CROSS-DECK LISTED FOR HUE CITY (CG 66) AS
PLACEHOLDER. SYSTEM MAY BE INSTALLED ON SPRUANCE (DD 963) OR
OAK HILL (LSD 51).
NOTE 2: TSCSI CROSS-DECK LISTED FOR CARNEY (DDG 64) AS
PLACEHOLDER.
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6. BELOW IS PLANNED AVIATION CONFIGURATION FOR JFK AIRWING CVW-7:

AIRCRAFT	#ONBD	SQDN	LINK CAPABILITY	ADDITIONAL NOTES
F-14B	10	VF-11	4	
F-14B	10	VF-143	4	TARPS
F/A-18C	12	VFA-136	4	LOT 13
F/A-18C	12	VFA-131	4	LOT 13
E-2C	4	VAW-121	4/11/16	GROUP II, LINK-16 ACR
-				ACR SOFTWARE VERSION J9
EA-6B	4	VAQ-140	4	BLOCK 89, HF VOICE
S-3B/KS-3B	6	VS-31	4/11	HF/SATCOM VOICE
SH-60F	6	HS-5		HF VOICE
HH-60H	2	HS-5		HF/SATCOM VOICE//

BT
#5393
NNNN
RTD:000-000/COPIES:

Section 1: PSN 138048Q24
Section 2: PSN 138050Q17
Section 3: PSN 138058Q25
Section 4: PSN 138067Q25

TO RULSSEA/COMNAVSEASYSCOM WASHINGTON DC//04/04M/04M5/05/53/
     53D/53H/92/92C//
RHMFIUU/CNO WASHINGTON DC//N6/N62/N2/N8/N85/N86/N87/N88/N09//
RUENAAA/CNO WASHINGTON DC//N6/N62/N2/N8/N85/N86/N87/N88/N09//
RHMFIUU/CMC WASHINGTON DC//PPO/C4I//
RUEACMC/CMC WASHINGTON DC//PPO/C4I//
RUCOSSA/COMNAVAIRLANT NORFOLK VA//N2/N4/N435/N6/N8//
RUCBTFA/COMNAVSURFLANT NORFOLK VA//N2/N4/N6/N8//
RUCBKMC/COMSUBLANT NORFOLK VA//N2/N4/N6/N63I/N8//
RHMFIUU/COMMARCORSYSCOM QUANTICO VA//C4ISR/SE+I//
RULSMCF/COMMARCORSYSCOM QUANTICO VA//C4ISR/SE+I//
RHMFIUU/COMMARFORLANT//G3/G6//
RUCBLFB/COMMARFORLANT//G3/G6//
RUWDHFG/COMSPAWARSYSCOM SAN DIEGO CA//04/04F/05/05F/PMW159//
RHMFIUU/COMSPAWARSYSCOM SAN DIEGO CA//04/04F/05/05F/PMW159//
RULSMSC/COMSC WASHINGTON DC//C4I//
RULSFAN/COMNAVAIRSYSCOM PATUXENT RIVER MD//1.0/3.0/4.0/40.E/
     5.0/PMA202/PMA205/PMA207/PMA209/PMA213/PMA250/
PAGE 02 RUCOMCB5393 UNCLAS
     PMA251/PMA260//
RULSFAO/PEOASWASM PATUXENT RIVER MD//PMA257/PMA261/PMA275/
     PMA290/PMA299//
RULSFAQ/PEOCMPANDUAV PATUXENT RIVER MD//PMA208/PMA258/PMA263/
     PMA280/PMA281/PMA282//
RULSFAP/PEOTACAIR PATUXENT RIVER MD//PMA231/PMA233/PMA234/
     PMA241/PMA265//
RULSABU/COMNAVAIRWARCENACDIV PATUXENT RIVER MD//4.0/4.5.8//
RULSMCC/CG MCCDC QUANTICO VA//WDID/REQT//
RULSFAF/PEO CARRIERS WASHINGTON DC//PMS312//

RULSSBI/PEO EXW WASHINGTON DC//PMS430/PMS440/PMS444/PMS471/
PMS472//
RULSDMA/PEO THEATER SURFACE COMBATANTS WASHINGTON DC//PMS400BF/
PMS400F/PMS410/PMS429/PMS461/PMS465/PMS467/PMS473/
ITF//
RULSSBF/PEO UNSEAWAR WASHINGTON DC//PMS403/PMS404/PMS411/
PMS415/PMS428//
RULSSBE/PEO SUB WASHINGTON DC//PMS392/PMS401/PMS425/PMS450//
INFO RULSSAU/COMNAVSURFWARCEN WASHINGTON DC//00/01/04//
RUWFPBC/NAVSURFWARCENDIV PORT HUENEME CA//00/4A00/4C00/4L00/
PAGE 03 RUCOMCB5393 UNCLAS
4Y00/4Y40//
RUCBFCD/NAVSURFWARCEN PORT HUENEME DET DAM NECK VA//6A00/6E00/
6E30/6E40/6M00//
RUERNWL/NAVSURFWARCEN PORT HUENEME DIV DET LOUISVILLE KY//4K00/
4K10/4K20/4K30/4Y40//
RULSBMS/NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA PA//91201//
RHMFIUU/NAVSURFWARCENDIV DAHLGREN VA//00/J52/J54/K05/N/N05/N13/
N25/N60/N64/T/T23/T24/T308//
RULSACW/NAVSURFWARCENDIV DAHLGREN VA//00/J52/J54/K05/N/N05/N13/
N25/N60/N64/T/T23/T24/T308//
RUERNWC/NAVSURFWARCENDIV CRANE IN//50/80W/805//
RUDJABX/NAVUNSEAWARCENDIV NEWPORT RI//22/34//
RHWISAZ/NAVUNSEAWARCENDIV KEYPORT WA//432/445/40W//
RUCOSSA/CINCLANTFLT BGSIT
RHRMDAB/COMUSNAVCENT
RUCJNAV/COMUSNAVCENT
RHMFIUU/CINCUSNAVEUR LONDON UK//00/N4/N6/N8//
RHDLCNE/CINCUSNAVEUR LONDON UK//00/N4/N6/N8//
RULYVBA/COMSECONDFLT
RULYVKA/COMPHIBGRU TWO
PAGE 04 RUCOMCB5393 UNCLAS
RHFJOSA/COMCARGRU SIX
RHFJFYZ/COMDESRON TWO FOUR
RUFRIKE/COMCARAIRWING SEVEN
RUCKMEA/CG II MEF//G3/G4//
RUCKMEN/TWO TWO MEU//S3/S4//
RHFJJFK/USS JOHN F KENNEDY
RHBDHUE/USS HUE CITY
RHFJFZA/USS VICKSBURG
RHFJFYS/USS SPRUANCE
RHFJFZN/USS CARNEY
RHRASJU/USS THE SULLIVANS
RUCTPIL/PRECOMUNIT ROOSEVELT
RHFJFYU/USS UNDERWOOD
RHRAJJT/USS TAYLOR
RHRABIG/USNS BIG HORN
RHRAZHN/USNS MOUNT BAKER
RUCBLKE/USS BOISE
RUEGARP/USS TOLEDO
RUFREST/USS WASP
RHRAEDG/USS TRENTON
PAGE 05 RUCOMCB5393 UNCLAS
RHRAOAK/USS OAK HILL
RUCBCLF/CINCLANTFLT NORFOLK VA//N6/N6A/N61/N66/N661/N664/N665/
N661C/N02C//
RUCOQAM/FTSCLANT NORFOLK VA//00//

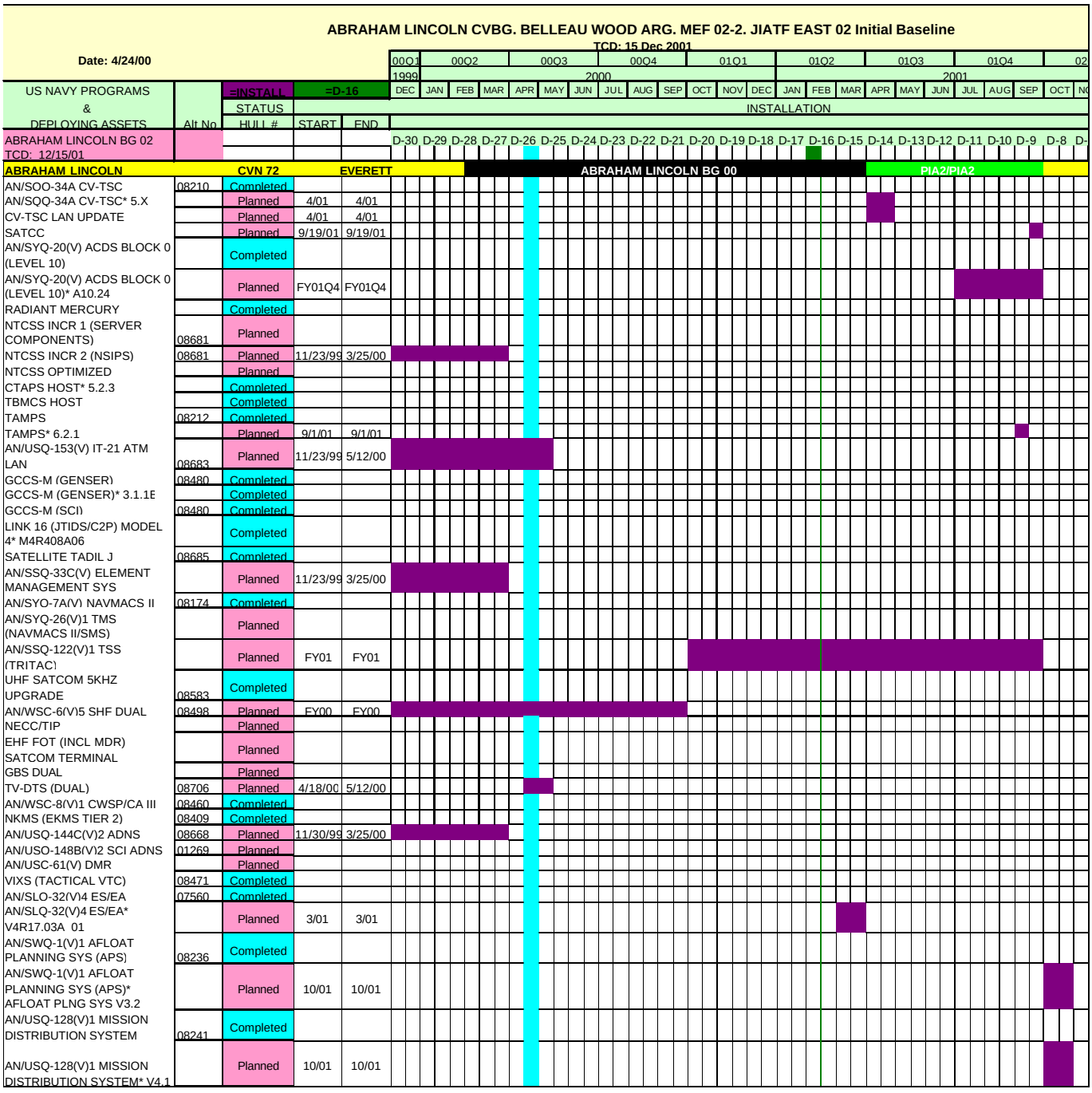
TAB G

Battle Group Specific Information

Each BFAO can choose what to put in here for their own battle force. Samples of the first pages here are provided for orientation of a new BFAO.

- NAVSEA Timeline Summary
- Battle Force Top Ten Issues
- TCD Waiver
- A-O Message

NAVSEA TIMELINE SUMMARY



BATTLE FORCE TOP TEN ISSUES

“CCG 3 132045Z MAR 00 identified ADM Balisle’s top ten BGSIT items (for LINCOLN 00 BF):

A. LINK-4A:

(1) 8.R ISSUE: LINK-4A UNABLE TO RECEIVE DOWNLINK (LINCOLN)

(2) 16.F ISSUE: LINK-4A INOP (SHILOH)

B. 8.X ISSUE: ACDS TRACKS OUT OF POSITION (LINCOLN)

C. HAVEQUICK:

(1) 8.AF ISSUE: UNABLE TO COMMUNICATE WITH A/C (LINCOLN)

(2) 13.C ISSUE: HAVEQUICK RECEIVERS DEGRADED (HOPPER)

D. 9.K ISSUE: SATELLITE LINK-11 INOP (BUNKER HILL)

E. 13.B ISSUE: CND DISPLAYS AIR TRACK AS DATUM (HOPPER)

F. 15.J ISSUE: CND AUTO CORR NOT OCCUR IN LINK-11 (PAUL HAMILTON)

G. 15.K ISSUE: LINK-11 HAS NO GRIDLOCK SOLUTION (PAUL HAMILTON)

H. 15.L ISSUE: CND DISPLAYS INVALID XF STATUS (PAUL HAMILTON)

I. 16.C ISSUE: SGS GRIDLOCK AND AUTO CORR FUNCTIONS HALT (SHILOH)

J. 17.C ISSUE: ACDS IMPROPERLY ASSUMED GRU (TARAWA)

Correction of BGSIT issues prior to RIMPAC (11 May 2000) is required".

TCD WAIVER

P R 090800Z MAY 00 ZYB PSN 832830M24
FM NAVSURFWARCENDIV PORT HUENEME CA//4K60//

TO RUCBCLF/CINCLANTFLT NORFOLK VA//N66//
INFO RUCBTFA/COMNAVSURFLANT NORFOLK VA//N6/N65/N601//
RULSSEA/COMNAVSEASYSCOM WASHINGTON DC//53/53H//
RULSSAU/COMNAVSURFWARCEN WASHINGTON DC//00//
RULSDMA/PEO THEATER SURFACE COMBATANTS WASHINGTON DC//400B/400F//
RULSDMA/PEO SURFACE STRIKE WASHINGTON DC//529//
RULYVBA/COMSECONDFLT
RULYVLA/COMCARGRU TWO
RULYHST/COMDESRON TWO
RUCOQAM/FTSCLANT NORFOLK VA//OIC/4221//
RUCBFCD/NAVSURFWARCEN PORT HUENEME DET DAM NECK VA//6A00 /6D00/6300/6M00//
RUCOFAR/CHET NORFOLK VA//OIC//
RHBDJAC/USS SAN JACINTO
RHBBFBS/USS STUMP
RHBDEWZ/USS DEYO
RUERNWL/NAVSURFWARCEN PORT HUENEME DIV DET LOUISVILLE KY//4K00//
BT

UNCLAS //N08800//
MSGID/GENADMIN/4K60//

SUBJ/TCD OFFER MESSAGE//

REF/A/DOC/CINCLANTFLT/27APR00//
AMPN/REF A IS CINCLANTFLT/CINCPACFLTINST 4720.3A, MGMT OF AFLOAT COMBAT SYS(S) AND C4I INSTALLATIONS AND IMPROVEMENTS.//
POC/J. WILSON/CIV/CODE 4K60/-/TEL:(805) 228-7629/TEL:DSN 296-7629//

RMKS/1. IAW REF A, REQUEST THAT GFCS MK 86 ORDALT 16665 SOLID STATE DRIVER AMPLIFIER (SSDA) REPLACEMENT FOR AN/SPQ-9A DRIVER TRAVELING WAVE TUBE (TWT) (11V1) BE INSTALLED IN SAN JACINTO, STUMP, AND DEYO DURING FY00 3RD QTR BY FTSCLANT. RISK FORMS HAVE BEEN SUBMITTED. CINCLANTFLT CONCURS WITH THIS CHANGE TO B/L, BUT REQUESTED A TCD OFFER MSG.

2. IAW ENCL 2 OF REF A, THE FOLLOWING A-0 INFO IS PROVIDED:
A - IDENTIFICATION OF CHANGE/TITLE - GFCS MK 86 ORDALT 16665.
B - TYPE OF CHANGE - HARDWARE - ORDALT 16665 REPLACES DRIVER TWT IN AN/SPQ-9A WITH SSDA. DRIVER TWT IS TOP CASREP AND SUPPORTABILITY DRIVER IN GFCS MK 86. SUPPLY SUPPORT WILL NO LONGER BE AVAILABLE FOR DRIVER TWT AFTER OCT 00.
C - PURPOSE OF CHANGE - ORDALT 16665 CORRECTS SUPPORTABILITY PROBLEM EXPERIENCED IN DD 963 AND CG 47 CLASS SHIPS.
D - OPERATIONAL IMPACT IF NOT INSTALLED:
1) GFCS ASU MISSION COULD BE DEGRADED UPON FAILURE OF DRIVER TWT (11V1).
2) THE SHIP WILL BE LIMITED MISSION CAPABLE.
E - PREREQUISITE REQUIREMENTS
1) THERE ARE NO OTHER HARDWARE PREREQUISITE OR CONJUNCTIVE CHANGES.
2) THERE ARE NO OTHER SOFTWARE PREREQUISITE OR CONJUNCTIVE CHANGES.
F - TESTING STATUS - COMPLETE - ORDALT PROOF-IN COMPLETED 25 FEB 00 IN VALLEY FORGE (CG 50).

G - SKED

1) TCD: 28 MAY 00 - CG 56, DD978, DD989.

2) PLANNED INSTALLATION COMPLETION DATE: 02 JUN 00 - CG 56 AND DD978, 14 JUL 00 - DD 989.

3) DURATION OF INSTALLATION: 3 DAYS.

H - ILS STATUS - THERE ARE NO OPEN ILS INTEG SUPPORT ISSUES. FINAL HARDWARE DRAWINGS WAIVERED, CERT EXPECTED 30 JUN 00; DRAWINGS ARE NOT A SHIP-DELIVERABLE PRODUCT.

I - TRNG - THERE ARE NO OPEN TRNG ISSUES. MAINT TRNG PROVIDED AT COMPLETION OF INSTALLATIONS.

J - IMPACT TO EXISTING SYS(S) - INCREASED RELIABILITY OF AN/SPQ-9 RADAR.

K - RISK ASSESSMENT: HIGH (CALCULATED) Y2K - NOT APPLICABLE

L - CONTINGENCY - IF THE CHANGE IS NOT INSTALLED, THERE IS NO INTEROPERABILITY WORKAROUND OR CONTINGENCY.

M - DOC - THE HARDWARD DOC HAS BEEN COMPLETED. DOC REQUIREMENTS: ALL APPLICABLE DOC REQUIREMENTS HAVE BEEN MET.

N - INTEROPERABILITY IMPACT - NONE.//

BT

A-0 MESSAGE

R 131219Z APR 00 ZYB PSN 336221L17
FM SPAWARSYSCEN CHARLESTON SC//71/714/714RM/712JC/711/714S//

TO RUCBCLF/CINCLANTFLT NORFOLK VA//N664//
INFO RUCBCLF/CINCLANTFLT NORFOLK VA//N02C//
RUCBTFA/COMNAVSURFLANT NORFOLK VA//N621/N24//
RUWDHFG/COMSPAWARSYSCOM SAN DIEGO CA//PMW163//
RHMFIUU/COMSPAWARSYSCOM SAN DIEGO CA//PMW163//
RUETIAA/NSACSS FT GEORGE G MEADE MD//J55//
RULYVLA/COMCARGRU TWO
RUCOAAA/COMDESRON TWO
RUCOADP/USS PORTER
RUCOFAR/CHET NORFOLK VA//OIC//
RUCOQAM/FTSCLANT NORFOLK VA//4235//
RUSKTEO/NAVSECGRUACT NORFOLK VA//N6/N6B//
BT
UNCLAS //N03200//
MSGID/GENADMIN/SPAWARSYSCEN CHASN//

SUBJ/STICS PREGROOM A-O OFFER MESSAGE//

REF/A/GENADMIN/COMNAVSURFLANT/271538ZMAR00//
REF/B/DOC/COMNAVSURFLANT/07APR00//
NARR/REF A, SURFLANT 3QTRFY00 AIT SCHEDULING MESSAGE. REF B, E-MAIL BTWN CNSL/LCDR UTT AND CLF/LCDR PROSE STATING REQUIREMENT FOR TCD WAIVER ISO SUBJ SYSTEM PREGROOM.//
POC/RON MCCUNE/CIV/-/-/TEL:843-218-5147/TEL:DSN 588-5147//

RMKS/1. FURTHER TO REF A AND STATED REF B, REQUEST AUTHORIZATION FOR IMPLEMENTATION OF SUBJ SYSTEM. AMPLIFYING INFORMATION FOLLOWS:

A. IDENFITICATION OF CHANGE: SCALABLE TRANSPORTABLE ITEGRATED COMMUNICATION SYSTEM (STICS) PREGROOM (SCI SECURE VOICE NETWORK).
B. TYPE OF CHANGE: PREGROOM/HARDWARE.
C. PURPOSE OF CHANGE: TO MEET UNFUNDED THEATER CINC REQUIREMENTS FOR ACCESS TO NATIONAL TASKING AUTHORITY.
D. OPERATIONAL IMPACT IF NOT INSTALLED: LOW - MINIMAL MISSION IMPACT. IF NOT INSTALLED, UNIT HAS NO DIRECT LINK TO NATIONAL TAKSING AUTHORITY.
E. PREREQUISITE REQUIREMENTS: NONE.
F. TESTING ACCOMPLISHED FOR APPROVAL: N/A.
G. SCHEDULE: INSTALLATION WILL BE COMPLETED BY SPAWARSYSCEN CHARLESTON PERSONNEL AND EQUIPMENT CROSSDECK AND OPCERT WILL BE COORDINATED BY NSGA NORFOLK/SECONDLFT/UNIT PERSONNEL. PREGROOM PLANNED FOR 30 MAY THROUGH 9 JUNE 2000.
H. ILS REQUIREMENTS: DRAWINGS TO BE PROVIDED.
I. TRAINING REQUIREMENTS: NONE.
J. IMPACT TO EXISTING SYSTEMS: NONE.
K. RISK ASSESSMENT: LOW RISK.
L. CONTINGENCY: UNIT WOULD BE REQUIRED TO HAVE SECOND BATTLEGROUP UNIT GUARD FOR TASKING VIA ALTERNATE SI VOICE CIRCUIT (I.E. ANDVT).
M. DOCUMENTATION REQUIREMENTS: NONE.
N. INTEROPERABILITY IMPACT: NONE.
O. POC: JOHN CHAP OR RON MCCUNE, CODE 714, 843-218-4748 OR 843-218-5147, CHAPJ"AT"SPAWAR.NAVY.MIL

2. FOLLOWING SUCCESSFUL COMLETION OF PREGROOM, REQUEST SHIP REPORTS

COMLETION USING FOL FORMAT:
ZNR UUUUU (DTG)
FM USS PORTER
TO COMNAVSURFLANT NORFOLK VA//N621/N24//
CINCUSNAVEUR LONDON UK//N9//
COMSECONDFLT
COMSIXTHFLT
COMFIFTHFLT
PAGE 04 RUCOMCC1934 UNCLAS
NSACSS FT GEORGE G MEADE MD//J55//
COMCARGRU TWO
COMDESRON TWO
BT
UNCLASS //N03200//
SUBJ/STICS PREGROOM INSTALLATION COMPLETION POC RMKS/1. IAW REF A,
STICS PREGROOM INSTALLATION SUCCESSFULLY COMPLETED DDMMMYY.
BT
END FORMATT//
BT